April 1943

APR 9 1943

CONSUMERS' RESEARCH

Bulletin

CONTENTS

Food and Cooking

Proper Meat Cookery . . . . . B. W. Gardner, Jr. 13
Extracting the Most from Your Coffee Ration Harry G. Parker 21

For the Amateur Photographer

Choosing a Camera for a Beginner—II 9

For the Automobile

More on Automobile Anti-freezes 8
Use Distilled Water, Not Tap Water, for Batteries 12
Storage Battery Dopes—Stay Away from Them 26

For the Home

Choosing Your Table Glassware 5
Any Pots to Mend Today? 22

Miscellaneous

Well Said, and Timely—National Association of Secondary-School Principals 17
Fertilizer for Your Victory Garden 18
The Man Who's His Own Lawyer 19

Features

Off the Editor's Chest 2
The Consumers' Observation Post 3-4, 29-30
Ratings of Motion Pictures 27
Phonograph Records . . . . . Walter F. Grueninger 31

CONSUMERS' RESEARCH

Vol. 11 • No. 7 BULLETIN April 1943

Off the Editor's Chest

PURCHASING today is carried on in a "sellers' market," as civilian purchasers are slowly beginning to realize. Gone are the days when consumers were the darlings of manufacturers, distributors, and retailers, and the salesman was trying to get his foot inside many a door to sell vacuum cleaners, aluminum ware, and automobiles. These times are so recently gone that many consumers do not yet fully realize that they are no longer beseeched, coaxed, and cajoled to buy this or that commodity.

It has been estimated by one department store executive that this sellers' market will continue for the next ten years. He points out that even though the war should end sooner than now anticipated, supplies from abroad will continue to be hard to get for a considerable length of time, and it will be impossible for civilian production to get under way again quickly.

The wise consumer will be the one who gives considerable study to the new outlook for his present and future purchasing. He will need to be intelligently aggressive to get what he wants and the best that the market affords. It was quite common several years ago for Consumers' Research to receive complaints from subscribers who were unable to buy this or that recommended article at their nearest shopping center. Occasionally comments would come in from more hardy souls who wrote that they had prevailed upon their grocers to stock certain recommended brands of canned goods, breakfast cereal or flour, or had been able to persuade a dealer to have one of the recommended makes of radio or refrigerator shipped in direct from the manufacturer. These persistent buyers, with initiative and unwillingness to accept defeat easily, are the ones who will fare best in the times ahead. Those who have been in the habit of giving up easily, and buying some other brand readily available but of unknown or inferior quality will need to learn new ways. Not only does quality inevitably deteriorate in wartime, but necessary articles, under the government's present policy of blocking or discouraging production of even the most essential goods for civilian use, will be increasingly difficult to find, except for the man (or woman) who uses his head, and approaches each problem with the knowledge and confidence that some sort of solution *can* almost always be found.

To understand this situation, it is important to keep in mind two things. First of all, the government *does not want consumers to buy things.* Its representatives have frankly said so. Before shoe rationing was instituted, considerable time and thought was applied by a 35-man committee from the industry together with government representatives to evolve a program for de-glamourizing women's shoes in order to discourage consumers' demand. As it turned out, not only has a program of rationing been imposed, but various measures de-

(*Continued on page 24*)

Scientific and Technical Experts and Editors: F. J. Schlink, R. Joyce, M. C. Phillips, A. R. Greenleaf. Technical and Editorial Assistants: Grace Matthews, E. B. Albright.

Symbols used to indicate sources of data and bases of ratings: A—recommended on basis of quality; AA—regarded as worthy of highest recommendation; B—intermediate with respect to quality; C—not recommended on basis of quality; cr—information from Consumers' Research's own tests or investigations; 1, 2, 3—relative prices, 1 being low, 3 high. Note that price and quality are completely differentiated in CR's listings; **a quality judgment is independent of price;** 42, 43—year in which test was made or information obtained or organized by the staff of Consumers' Research.

It will be advantageous if you will, whenever possible, send prompt notice of change of address at least a month before it is to take effect, accompanying your notice with statement of your old address, with name in full. At least three weeks' notice must be given in any case, except in the case of military personnel. For such personnel, changes of address will be specially handled whenever necessary.

CONSUMERS' RESEARCH BULLETIN, issued monthly, except during July and August, by Consumers' Research, Inc. Editorial and Publication Offices, Washington, N.J. Single copy 30c. Subscription price (including Annual Cumulative Number) $3 per year, U.S.A.; Canada and foreign, $3.50. For libraries, schools, institutions, etc., a special subscription of nine monthly BULLETINS (October-June, inclusive) is available at $2; Canada and foreign, $2.50. ¶Responsibility for all specific statements of fact or opinion at any time made by Consumers' Research lies wholly with the technical director and staff of the organization. Entered as second-class matter November 9, 1934, at the Post Office at Washington, N.J., under the Act of March 3, 1879; additional entry at Easton, Pa. Copyright, 1943, by Consumers' Research, Inc., Washington, N.J. ★★ Printed in U.S.A. ★★ CONSUMERS' RESEARCH BULLETIN is on file in many school, college, and public libraries and is indexed in Industrial Arts Index and in the Readers' Guide to Periodical Literature.

The Consumers' Observation Post

MUSHROOMS HAVE A MORE IMPORTANT VALUE in the diet than just flavor appeal. According to research by two Massachusetts agricultural scientists, mushrooms are exceptionally high in iron and the highly essential vitamin B complex. They are not to be regarded as a substitute for the protein of meat but have an important place in the diet as an "extender" for added nutritive value.

* * *

TIME TO CHANGE THE CRANKCASE OIL in the family automobile is now here in many sections of the country. Although some sources still insist that it is necessary to change the oil every 1000 miles of driving, the best advice in this field is that, under conditions of normal use, the crankcase of a car does not need to be drained and filled with new oil more than twice a year—once before cold weather sets in in the fall, and again before warm weather comes in the spring. In the more severe climates, however, if the car is used very little or for only short trips, it is important in winter to change the oil every month or two to prevent possible damage caused by the accumulation of water in the crankcase. Otherwise sludging may occur which may choke off oil circulation, freeze and block the oil pump, or plug the circulating pipes.

* * *

RAW PINEAPPLE JUICE contains an active enzyme called bromelin, which is able to digest proteins. It is this enzyme that makes it impossible to use raw pineapple in gelatin desserts. For the same reason, it is an excellent substance for clearing a choked-up throat. The enzyme is destroyed when pineapple is cooked.

* * *

THE EASY WASHING MACHINE CORP., Syracuse, N. Y., instituted last fall a policy of giving refresher courses in repairs to its divisional managers and other executives. It is the company's announced policy to keep Easy washers in good working condition in order that women may be free to contribute more time to the war effort. Washer-rebuilding stations have been planned for strategic areas.

* * *

CURTAILMENT IN THE AMOUNT OF CERTAIN DYESTUFFS that may be used in production of fabrics for civilian use will likely not be visible to the average shopper in the profusion of drapery materials, cretonnes, chintzes, sateens, and novelty cottons that are making their appearance this spring. Delicate colors on deep backgrounds, bold, brightly colored designs are to be found in profusion. Currently, chief sign of dye shortage is likely to be the absence of a "nice bright yellow." Making their appearance to some extent, however, are the prints of slight and far spaced patterns on white or light backgrounds which are said to be the vanguard of the styles to come.

* * *

GOLFERS—IF THEY ARE NOT ALL BUSY WITH VICTORY GARDENS—will do well to remember that a general limitation order was issued last fall forbidding the use of iron, steel, and other critical materials for the repair of bent, broken, and otherwise banged-up clubs. Take good care of the clubs you have. Seiberling Rubber Company, Chicago, the May Company, Cleveland, and Sears, Roebuck's retail stores in Chicago were at one time offering to buy old golf balls for reconditioning. Some dealers may still be continuing this practice.

CROQUETTES ARE SCHEDULED TO BE AN OFT-RECURRING DISH on the family menu, comes meat rationing. Those whose business it is to put over such dishes say that it is an excellent way to extend the meat. One recipe calls for plenty of bread or cracker crumbs and a few scraps of meat from the neck of the chicken. Sounds like slim pickings for the hearty eater.

* * *

SCARCITY OF SERVICEMEN AND REPAIR PARTS for refrigeration equipment has caused the spoilage of thousands of dollars worth of foodstuffs in one area, according to a survey made by a trade association. The shortage of men was due to the failure of local draft boards to defer them, as essential civilian workers, from immediate military service, yet the refrigeration work on which they were needed included such essential installations as war production plants, hospitals, schools, meat markets, and ships.

* * *

MIXED VEGETABLE JUICES, sometimes referred to as vegetable juice cocktails, contain less vitamin C than ordinary tomato juice according to studies made by the Council on Food and Nutrition of the American Medical Association. The Council, in the same report, criticized the advertising of such products for giving the erroneous impression that they contained all the nourishment of the various vegetables present. Actually, the Council's report pointed out, "mixed vegetable juices are likely to be inferior in nutritive value to ordinary tomato juice."

* * *

THE OWNERS OF 1942 AUTOMOBILES will find their cars will still be in fashion after the war, if the family bus lasts that long. The chairman of the board of General Motors in a speech early this year predicted that the first cars made when civilian production is permitted to be resumed will be the 1942 models, because there has been no time to work out new designs during the period of all-out war production. It is obvious that large production of new cars would be needed at once at the war's end.

* * *

FISH DOES NOT RANK SO HIGH IN NUTRITIVE VALUES AS MEAT, according to nutrition reports. Shell fish, such as oysters, clams, lobsters, crabs, and shrimps, on the other hand, may be eaten whole, and so furnish the valuable properties of a whole organism including the internal organs. Oysters, for example, have been held to provide higher nutritive value than cow's milk, in supplying a high content of calcium, iron, and other minerals, and all the vitamins. Whole organisms are especially likely to provide all needed vitamins and food minerals.

* * *

ANYONE MAY PURCHASE A SECONDHAND BICYCLE—if he can find one for sale. The prices, however, are likely to persuade the thrifty minded consumer whose income is not in a class with that of a shipyard or airplane worker that he had better keep on walking. While a new bicycle has a ceiling price of $34.50 and is available only to a very limited group of civilians, dealers have no difficulty, according to a trade journal, in getting from $45 to $50 for a good rebuilt bike. On the West Coast—which perhaps should be called the Gold Coast—a cycle shop was reported as getting $7.50 for an overhaul and paint job, with the price upped to $25 or $30 if the overhauling included such items as new fenders, tires, seat, and other accessories.

* * *

U. S. PHOTOGRAPHIC DEALERS contemplating post-war conditions are beginning to complain that they are not getting a fair break from their government. One trade journal points out that while American manufacturers have been deprived of even small lots and scraps of material with which to produce cameras for the civilian market, British manufacturers are openly boasting that the war has opened certain overseas markets to their products that were closed before and that there will be post-war British-made precision cameras that will rank among the world's best. Some folks in this country are beginning to wonder why we must invariably follow British example along the lines of sacrifice and reduction of the standard of living, but disregard British example when it comes to policies affecting progress and invention, production and trade.

(The continuation of this section is on page 29)

Choosing Your Table Glassware

GREAT PROGRESS has been made in the art of producing American glassware since the days of the first glass house at Jamestown, which in 1608 for a brief time turned out glass beads to serve as money in trading with the Indians. The subsequent story of American glass, flint glass and bottle glass, blown glass, pressed glass, cut glass, as well as the more famous wares made in Wistarberg, New Jersey, by Wistar; Lancaster County, Pennsylvania, by Stiegel; and in Sandwich, Massachusetts, is a fascinating one of great interest to a growing number of collectors. The history of American glass, however, is of interest to buyers of modern ware, chiefly for the styles, shapes, and designs for those whose houses, furniture, and decorations are patterned after some particular era, and who wish to carry out the same motif in their glassware and china.

Some of the outstanding patterns which either express the old-time influence or are accurate reproductions of patterns of earlier days include: Cape Cod, Victorian, and Candlewick by Imperial Glass Corp., Bellaire, Ohio; Mount Vernon, by Cambridge Glass Co., Cambridge, Ohio; Waterford, by Libbey Glass Co., Toledo, Ohio; Wistar, Colony, and American, by the Fostoria Glass Co., Moundsville, W. Va.; and the Williamsburg pattern, by the U. S. Glass Co., at Tiffin, Ohio.

The true collector or dealer in antique glass considers the use of reproductions an offense in a class with plagarism or libel. It is true, of course, that reproductions of old glass are at times passed off on the unwary and uninformed purchaser as "genuine antiques." On the other hand, a person of modest means who wishes to carry out the Colonial, Regency, or Victorian theme may be pardoned for selecting a modern reproduction moderately priced to suit her pocketbook. Accurate reproductions of the fancy compotes, fancy plates, hen and rabbit dishes in milk glass, as well as some of the best known pressed glass goblets, such as *Westward Ho* and *The Lion*, together with glass cup plates are made by the Westmoreland Glass Co., Grapeville, Pa.

Making a Selection

Aside from one's preference for a particular pattern or design, there are other factors to be considered in purchasing table glassware. Since such glassware is inherently fragile, it is wise to select a pleasing pattern from the low or moderate price range, particularly when there are children in the family. Some knowledge of the nature of glass and the processes of manufacture and decoration may be helpful in making a wise selection. Before choosing a design or pattern, bear in mind that the goblet type of glasses is the most likely to be upset and broken easily. A footed glass of any type offers more possibility of breakage than the plain tumbler. For those who customarily drink a good deal of water at the table, the iced-tea glass, which is considerably larger than the water tumbler, has real practical advantages, and may save the housewife from getting up from the table to fill the glasses a second time. Considerable information regarding selection and care of drinking glasses will be found in the little booklet "The Art of Making Fine Glassware," put out by the Cambridge Glass Co., of Cambridge, Ohio.

Materials Used

Glass may be described as a hard, brittle, usually transparent substance formed by the fusion under heat of silica sand, alkali, and other materials. There are two types of glass, according to the nature of the ingredients in the batch: "lead" glass or "lime" glass. A preponderance of lime in the batch produces a very brittle glass, while lead is used in the mix (usually as the red oxide of lead) to increase the brilliancy and durability. The term "rock crystal" or "crystal" is often used to describe glassware. Merely as an adjective descriptive of general appearance, the term may have some degree of justification, for high-quality glass should have brilliance, transparency, and freedom from bubbles and cloudiness and whiteness. As the term is used in the trade, rock crystal may be a fine, handmade glassware that has been cut and polished. True rock crystal, however, is natural quartz, and while there have been cups and other items made from this mineral, they are extremely costly and are for the most part in the class of museum pieces.

One major factor that makes for high quality in glassware is the nature of the original ingredients. A high degree of purity is important for the silica sand which is the principal ingredient, for the presence of only a fraction of one percent

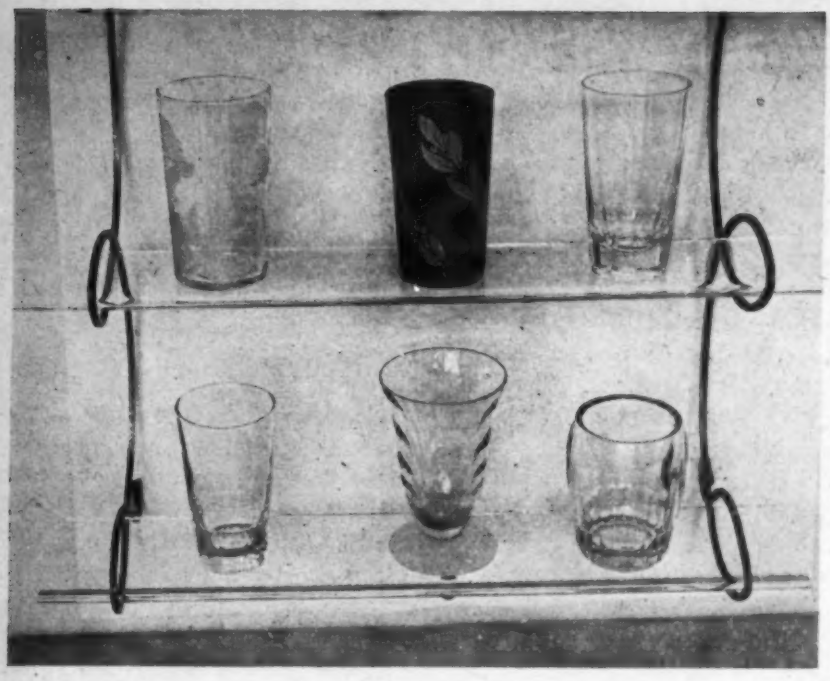


Fig. 1—*Top row, left to right: Orchard Crystal, Apple Beverage; Anchor Hocking; U. S. Glass. Bottom row, left to right: Libbey; Cambridge, Caprice; Woolworth.*

of iron will produce an off-color.

The care used in annealing (one stage in the glass-making process when the shaped piece is set in a long oven, where it is first reheated and then allowed to cool slowly and uniformly) has an important bearing on durability. Uneven cooling may cause a strain in the slowly setting mixture, and breakage will occur more easily thereafter, when the piece is used.

Glass is decorated by the use of several different methods. It may be cut, engraved with a copper wheel, etched with acid, sand-blasted, or decorated with silver mounting, enameling, hand-painting; encrusted with gold or platinum; or gilded. While cut glass is not often seen in shops at the present time, there was an era when the most fashionable glass was cut. Those who possess pieces of this type should take care to see that the glass is not subjected to changes of temperature or rough handling, for cut glass is more sensitive to thermal or other shock than uncut glass; a slight knock may cause a crack or break along the line of a cut.

Advice on Proper Care

Fine glassware deserves good care. It should not be subjected to rapid changes in temperature or to extremes. Rinse it in cold or tepid, not hot, water; use mild soap such as you would use on fine woolens, and dry glassware with a soft towel. It is advisable also to place a cloth in the bottom of a dishpan and on the drain board to guard against accidental sharp contacts of the glass with metal. Metal encrusted glassware should be washed only in soap suds. Keep ammonia and other strong alkalis away from it. Although glass is considered to be insoluble in water, it may be attacked by alkaline substances like soda and become rough. Glasses should never be stacked one into the other. If the glasses or glass cups are used for hot drinks, it is important to place a silver spoon in the glass or cup before pouring hot liquid, such as hot water, tea, or coffee, into it. A paper doily should be placed on glass plates under fruit ice or ice cream.

Very tiny nicks may be removed, according to one source of information, by rubbing size 00 emery paper, wrapped around a small stick, back and forth across the nick. The "frosting" effect left by the emery paper may be removed by rubbing it with polishing rouge on a leather strap. The process, however, is tedious.

There are three points to observe in selecting fine glassware: The glass body itself should be clear as spring water; if it is colored, the color or tint should be rich and sparkling, never dull or muddy. A good quality lead glass will give a clear bell-like ring when a goblet is tapped on the edge with the fingernail. If the glassware under consideration is decorated, all decorative details should be clear and distinct.

CR's Tests

Since little or no research work from the ultimate consumers' standpoint has been carried on in this field, CR decided to do a bit of pioneering and to carry out tests of a number of well-known brands of table glassware. Glasses of 11 well-known makers, and one sample purchased at the F. W. Woolworth stores were judged for appearance and tested for weight, capacity, resistance to boiling, thermal shock, and impact. The thermal shock test included 5 cycles of changes from water at 16° to 17°C into boiling water. The impact test was done by the rolling of a brass ball under standard con-

ditions to strike the rim of the glass, with each specimen tested being held in the standard manner at a point below the point of impact. Increasingly severe blows were applied until failure of some type occurred. This test was applied to 5 specimens of each sample. No samples showed failures in the boiling test nor did any show evidence of corrosion, scumming, chipping, or cracking. All came successfully through the thermal shock test, corresponding to the test specified by the Federal Specifications on Glass Tableware, indicating a very satisfactory degree of annealing of such glassware at the present time.

The glasses made by Cambridge, Fostoria, Heisey, Imperial, U.S. Glass Co., McKee, and Rock Sharpe were of crystal quality in clearness and brilliance. Glasses by Dunbar and Libbey were off-color, with a yellowish cast. Some of the Orchard glasses showed minute surface scratches or nicks as if the sand blast used for the pattern had marked them. The glassware by Anchor Hocking showed color variations and surface imperfections. The glasses purchased at F. W. Woolworth stores were off-color and lacking in brilliance and did not have the fine surface finish of the other glasses.

The lightest glasses, size considered, were *Anchor Hocking, Orchard Crystal, Imperial Candlewick*. The rest would be classified as medium heavy.

It would appear that Heisey, Libbey, and McKee glasses are somewhat more susceptible to chipping than the others tested. While this might be accounted for in the case of Heisey glass by its being very thin at the top, the Libbey and McKee were relatively heavy. The heavy Woolworth glass was particularly strong in this test and evidently well suited for hard service.

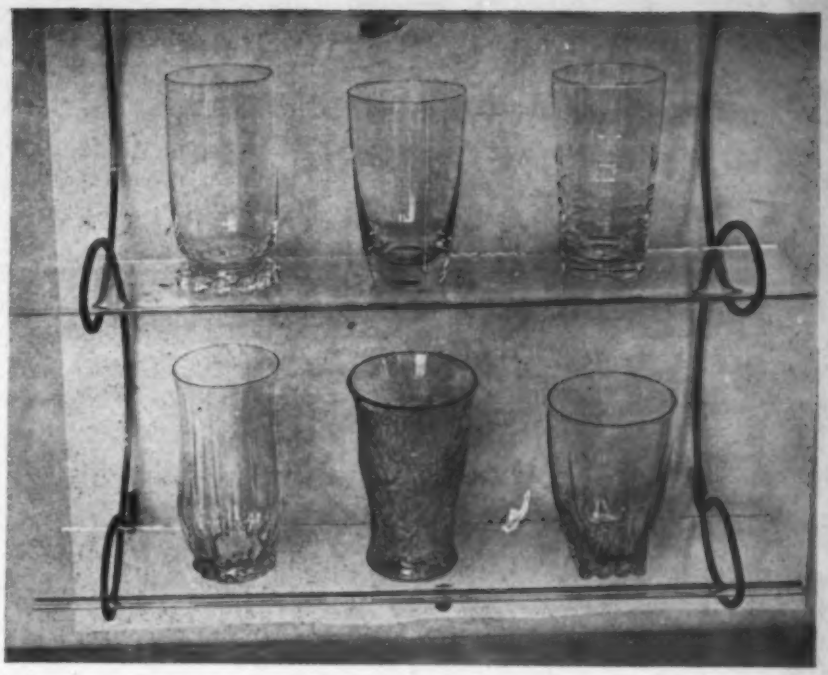


Fig. 2—*Top row, left to right: Imperial, Candlewick; Fostoria, Standish; Rock Sharpe Crystal. Bottom row, left to right: Heisey, Crystolite; McKee, Early American Rock Crystal; Dunbar.*

The ratings which follow were based chiefly on appearance and on the strength of the glasses determined by the impact test.

A. Recommended

The 7 brands rated *A* possessed clarity and brilliance.

Cambridge, *Caprice* pattern, Alpine Moonlight (Cambridge Glass Co., Cambridge, Ohio) $9 a dozen. Pale blue with frosted foot.

Fostoria, *Standish* pattern (Fostoria Glass Co., Moundsville, W. Va.) $6 a dozen. Results of impact tests on these glasses indicated that they had been weakened somewhat in the thermal shock test.

Heisey, *Crystolite* pattern (A. H. Heisey Co., Newark, Ohio) $4.40 a dozen. Glasses showed mold marks and were thin and easily broken about the rim.

Imperial, *Candlewick* pattern (Imperial Glass Co., Bellaire, Ohio) $7.80 a dozen.

McKee, *Early American Rock Crystal* (McKee Glass Co., Jeannette, Pa.) $4.50 a dozen. Glasses broke readily in spite of their thickness.

Rock Sharpe Crystal (Sharpe, Inc.; Helm, Saunders & Piper, Merchandise Mart, Chicago) $4.20 a dozen.

U. S. Glass, 10-facet base (United States Glass Co., Tiffin, Ohio) $7.80 a dozen. Facets at the base showed grinding marks.

B. Intermediate

Anchor Hocking, ruby with white garland (Anchor Hocking Glass Corp., Lancaster, Ohio) 72c a dozen. Red glass with applied decoration.

Dunbar (Dunbar Glass Corp., Dunbar, W. Va.) $3.50 a dozen. Glass was off color slightly and lacked brilliance.

Libbey (Libbey Glass Co., Toledo, Ohio) $2 a dozen. Glass was clear but off color. Facets at base showed grinding marks.

Orchard Crystal, *Apple Beverage* pattern (Newland, Schneeloch & Piek, Inc., 1107 B'way, New York City) $1.50 for a set of 8 glasses. Fair color and brilliancy but showed minute surface markings in some areas. Decorations showed signs of hasty workmanship.

Woolworth plain tumbler, base marked with "J" in a square (F. W. Woolworth Co., Chicago) 40c a dozen. A purely utility product, of the general bulging-center or barrel shape common in the cheaper restaurant glassware. Very sturdy glass.

More on the Anti-freeze Racket

WHILE BY THE TIME this appears, the need for buying automobile anti-freeze will be past in most parts of the United States, we are returning to the subject again, in the belief that the consumer will wish to know while the subject is fresh, about this important demonstration of the undesirability of taking advertising claims at face value.

In the February 1943 issue we reported on a test of four anti-freeze solutions, three of which were essentially calcium chloride, and the fourth, an oil or petroleum product solution similar to kerosene, all highly undesirable as anti-freeze solutions because of their undesirable effect on radiators, engines, or hose. A fifth widely sold product, *60 Below*, tested also and found to be a calcium chloride solution, was not reported on, as it was impossible at the last moment to obtain positive identification through affidavit that the sample purchased from bulk stock was in fact *60 Below* as it was asserted to be. The finding on *60 Below*, however, has now been verified, and further information obtained on other brands.

The War Production Board has prohibited the manufacture (not the sale) of these types of anti-freeze solutions, and the OPA has set maximum prices of 75 cents to 85 cents a gallon for salt-base solutions and 35 cents to 43 cents a gallon for solutions made from petroleum naphtha. If the government is to take control of such matters, it seems that it is a poor excuse for effective action to prohibit the manufacture of a product, but at the same time to set a price limit on its sale.

To help those who might be tempted to buy a stock of anti-freeze now for next season, we append a fuller (though doubtless still incomplete) list of brands that are definitely not to be recommended for use in automobile radiators. The only safe course for the consumer to follow will be *never to use any anti-freeze product unless he is in a position to determine its chemical composition by analysis*. The rule thus boils down to **analyze or avoid.** The consumer may also disregard any manufacturer's claim that his product contains an inhibitor to prevent corrosion, for the known corrosion inhibitors do not work in salt solutions. All the solutions are of the corrosive or potentially corrosive calcium chloride type (salt solutions) unless otherwise designated by an asterisk (*). Those so marked are petroleum distillates (similar to kerosene).

C. Not Recommended

All-Winter (All Winter Anti-Freeze Co., Columbus, Ohio).
Bird Antarctic (Bird Antarctic Anti-Freeze Co., Bloomfield, Iowa)
Bond (Top Line) (Tenn. Valley Associated Marketers, Nashville, Tenn.)
*Chem-A-Cool** (Chem-A-Cool Co., Columbus, Ohio)
Ever-Flo (Ever-Flo Anti-Freeze Co., Cleveland)
Flexo (American Chemical Co., Atlanta, Ga.)
Fre-Zex (Research Manufacturing Corp., Boston)
Frozone (Bryce Chemical Industries, Chicago)
Gold Seal (Gold Seal Mfg. Co., Brooklyn, N. Y.)
*No-Freeze** (Great Northern Chemical Co., Oak Park, Ill.)
*Permazone** (Midwest Chemical Corp., Topeka, Kans.)
Security (Morco By-Products Co., Chicago)
60 Below (Freedom Chemical Co., Cleveland)
Wonder-Solv (Miller Mfg. Co., Camden, N. J.)
Zero-Flo (Banner Mfg. Co., Brooklyn, N.Y.)

As to the credence consumers can place in certain manufacturers' claims, it is interesting to examine the advertisements of one of the manufacturers, the maker of *60 Below*, who, according to the Federal Trade Commission, claimed that the product was "a perfect permanent anti-freeze solution for use in automobile and truck radiators and will not gum up, seep, or cause corrosive damage to automotive metals; that it is superior to competitive solutions which have proved ruinous and costly; that it has been tested and approved by laboratories of Northwestern and Purdue universities and Firestone Tire & Rubber Co. and Pittsburgh Plate Glass Co., and that comparative tests conducted by the Bureau of Standards substantiate all of the respondent's claims for its product." A release on *60 Below* issued recently by the Federal Trade Commission alleges that "all such representations are false and misleading and that '60 Below' is composed of a calcium chloride base, is inferior to anti-freeze solutions containing glycerin or alcohol bases, and will not accomplish the results claimed for it. The tests conducted by the Bureau of Standards, the complaint continues, showed corrosive effects on automotive metals used in the cooling and ignition systems, distributor caps, and water pumps, and the product has not been approved after tests by laboratories of the universities and corporations named."

Choosing a Camera for a Beginner—II

This is the second part of an article dealing with choice of a camera, written, so far as possible, in simple, non-technical language. (Most articles in photographic journals treat topics that are of little interest to the average beginner or use unfamiliar and forbidding technical terms, often even when discussing fairly simple things.) The first article of the series, in CR's March issue, covered the various kinds of cameras that are available, simple box cameras, folding roll-film cameras, reflex cameras, single and double extension plate-and-film-pack cameras, and view cameras.

THE ROLL-FILM CAMERA, despite its limitations from the expert's standpoint, is unquestionably the most popular type. Simple folding cameras with "rapid rectilinear" and f:7.7 well-corrected anastigmat lenses are available at reasonable prices. At the other end of the scale are the "deluxe" models, miniature and otherwise, fitted with very fast (anastigmat) lenses and coupled range-finders. (A range-finder is an optical device which enables the user to determine with some accuracy the distance from the camera to the object being photographed. The camera is then focused by adjusting the pointer on its focusing scale to this distance, or if the range-finder is mechanically *coupled* to the lens-carrier of the camera, the camera is automatically focused by the act of turning the adjusting knob of the range-finder.) When fitted with good lenses and used within their limitations, roll-film cameras, in the medium and larger sizes at least, are capable of producing first-class negatives of good definition that may be enlarged to a considerable degree.

Within recent years there has been a decided vogue for cameras which take very small negatives, and those taking negatives on the standard 35 millimeter motion picture film have been very popular among those who do not realize the limitations of negative-making upon small areas. Of the cameras taking movie-size film, those giving 24 mm. x 36 mm. negatives are the most popular; there are also cameras using the same film size for making pictures 18 mm. x 24 mm., 24 mm. x 24 mm., and 28 mm. x 40 mm. (a millimeter is approximately 1/25 of an inch). Because of the small size of such negatives (and the smallest of the sizes made on other types of roll-film as well), only the most precisely made and adjusted cameras will give satisfactory results as a rule. All cameras using these very small size negatives present particular difficulties to the amateur, since the pictures are practically unusable without enlargement, and good enlargement requires meticulous, almost surgical, care in processing the negative and in subsequent operations. The miniature and all very small cameras are simply "out" for anyone who does not have an exceptional feeling for precision and attention to minute and often troublesome details in processing. An ordinary or careless worker will have difficulty enough in processing films 2¼ x 3¼ inches up, in a way to avoid spots, marks, and scratches of a sort that will interfere with the quality of the resulting print. Thus the buying of any one of the *cheap* cameras meant for taking pictures on 35 mm. width film is usually a sheer waste of money. Such cameras are often clever imitations of good and honestly made miniature cameras, being shaped and plated and equipped with various buttons, knobs, and fitments in ways well devised to give plenty of "flash" appearance and so fool the beginner.

Good photography is difficult enough without starting with the handicap of very small negatives, and only the amateur willing and able to exercise extreme care should consider the purchase of a miniature camera, unless he can be sure of being able at all times of having his films developed, and printed or enlarged by an expert. The lowest-priced camera of this type which CR has tested and found deserving of an *A. Recommended* rating is the *Kodak 35*, $35.50, fitted with *Kodak Anastigmat Special* f:3.5 lens.

Although as has been indicated, 35 mm. cameras, until very recently, have had a tremendous vogue, the present trend is away from this small size, and its use in future will be limited (not entirely, but largely) to pictures that are to be projected, where the small size is not a disadvantage. Probably 2¼ x 2¼ inches will be the smallest size in wide use for black and white pictures for other than projection use, except for work of specialists in reproducing of documents, "record photography," and the like, where cheapness per exposure and ease of making many exposures in quick succession

are primary factors.

The next larger size of roll-film is the No. 127, originally intended for making 8 pictures each 1⅝ x 2½ inches, but now also used in some cameras making 12 exposures each 1⅝ x 1⅝ inches, and in some which make 16 pictures each 1¼ x 1⅝ inches. Most of the folding cameras which use this film are smaller and more compact than most 35 mm. cameras. Two good reflex cameras using this film are the *Exakta*, Model B, and the *Rolleiflex* 4 cm. x 4 cm. (40 x 40 mm.) which on the pre-war market sold for around $90 and $135 respectively.

Probably the sizes of camera most popular at present are those which use the No. 120 roll. Originally intended for making 8 pictures each 2¼ x 3¼ inches, this roll is now used also for 16 pictures each 1⅝ x 2¼ inches, making the *cost per picture* only a little over one-half that of the approximately same size picture (1⅝ x 2½) taken on the No. 127 roll; it is also used (in other cameras) for 12 pictures, each 2¼ x 2¼ inches. One popular type of camera, available in several makes, takes either 8 full-sized or 16 half-sized pictures, in the latter case by the use of a separate mask, usually removable, in the back of the camera. Experience of many photographers, including some of the most advanced experts, has indicated the satisfactory quality of negatives of the 2¼ x 2¼ inch size. In CR's opinion it is the smallest size that will give reasonably satisfactory contact prints, and will at the same time permit making salon enlargements in 11 x 14 inch to 16 x 20 inch sizes. Before considering the purchase of a 2¼ x 2¼ inch camera, make up your mind whether you would be satisfied with that small size of print, without enlargement, for all or most of the pictures taken. The finished picture will be a square whose side is almost exactly the width of this column of type. (Suitability of such pictures is an individual matter depending in part upon personal taste and partly upon one's acuteness of vision and capacity to see and appreciate very fine detail in a small picture.)

In the 2¼ x 2¼ inch size there are several reflex cameras, some equipped with a single lens and a focal-plane shutter, and others with the "taking" lens mounted in a between-lens shutter, and with a separate lens for focusing. Each has certain advantages not possessed by the other. A single-lens type has the advantage of permitting use of interchangeable lenses of various focal lengths and angles of view. It also avoids the error in judging of the limits of the field of view (the parallax error) which causes some trouble in framing near views with all but the higher-priced, finely-made twin-lens reflex cameras. Perhaps its most important disadvantage is that focusing in many cases must be done with the lens stopped down to the aperture required for taking the picture. Often this gives a dim image on the ground glass, and one which is hard to focus. With the twin- or double-lens reflex cameras, the user can focus with the focusing lens wide open while the "taking" lens remains at whatever smaller aperture is needed for the particular picture to be taken. Many twin-lens reflex cameras have a focusing lens larger than the "taking" lens in order to increase the brilliance of the image. This simplifies the problem of focusing, which is an important advantage for people not very familiar with the use of optical instruments.

Folding cameras using No. 116 roll-film are also popular. This film was originally intended for making 8 pictures each 2½ x 4¼ inches, but is also used in a few cameras to take either 15 or 16 pictures each about 2 inches or 2-1/16 x 2-1/2 inches. When so used, the cost per picture is less than that of the equivalent 2¼ x 2¼ inch picture taken on the No. 120 roll. Due presumably to the diminishing popularity of the 116 size, good used cameras using the No. 116 roll are often to be found at prices somewhat lower than those asked for equally good cameras using No. 120.

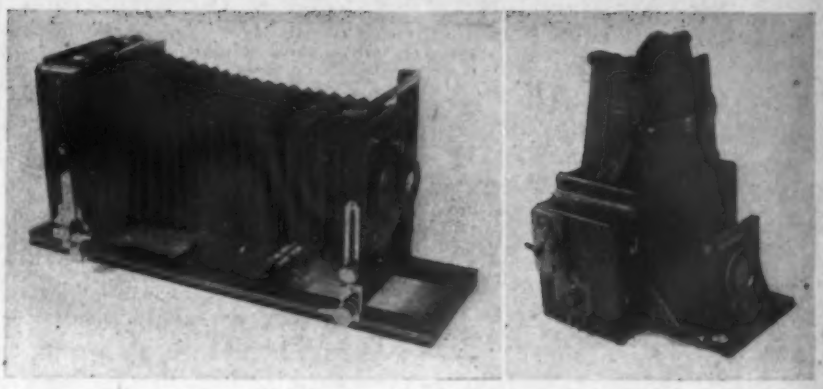
The amateur who wants a good sized picture which will not need to be enlarged, should consider the 122 or post card size—3¼ x 5½ inches. These cameras, once very popular, are now very little used because of the high cost of film and paper that goes with the large size. Nevertheless they are often an especially desirable purchase secondhand because of the slight demand, and a fair supply of them, usually reasonably priced, is available at secondhand dealers (the heavy sellers being in the miniature or near-miniature classes).

Two other roll-film cameras, known as No. 2C and No. 3 respectively, one using No. 130 film (2⅞ x 4⅞ inches), and the other No. 118 (3¼ x 4¼ inches), are pretty well out of the picture nowadays except for consumers who live in large cities or buy film by mail, for the film for these is seldom found except in well-stocked supply houses. A camera in these sizes will often be a poor buy unless avail-

able cheaply enough to be worth considering for its lens and shutter alone.

Plate cameras (which, of course, are easily adapted to the use of cut-film (the most desirable of all negative mediums from most standpoints) are available in sizes from 4.5 cm. x 6 cm. up. The plate cameras made by the Europeans have been more compact than the American ones; likewise the plate holders used with them. (These do however tend to develop "light-leaks" sooner than the American type of plate holder.) Most buyers of the European type hand camera will wish to select either the 6.5 cm. x 9 cm. or the 9 cm. x 12 cm. size, since in either of these sizes, negative material is relatively easily obtained. In other centimeter sizes there will often be difficulty in finding film or plates. On the whole, European-made cameras have been a good deal better than the American ones, but much junk and near-junk will be found among European makes, too, for some of these were imported to facilitate "bait advertising" and to act as "cut-price leaders." As far as is known, the only American-type plate and film-pack cameras available new are the *Speed Graphic*, the *Burke & James Press* camera, the *Fink-Roselieve Reporter*, and *Busch Pressman*.

If one is content to buy one of the older models of cameras (and it would be our advice that this be done in the present market), one can often buy one at a reasonable price and in excellent condition. Many of these older used cameras were provided with some of the adjustments now usually to be found only on view cameras. Although an occasional camera of smaller size may be found,



Typical Cameras for Advanced Users. At the left is shown a **view camera** *which sold before the war, without lens, at from $30 up in 3¼" x 4¼" sizes. View cameras are made in sizes up to 11" x 14". At the right is a 3¼" x 5½"* **single-lens reflex camera** *(Graflex). Pre-war Graflexes were priced new at $106 to $270, depending on size and lens equipment.*

the majority of the bargains among used large cameras will be either 4 x 5 inch or 5 x 7 inch. Sometimes a camera in the obsolete 6½ x 8½ inch size will be priced exceptionally low, but one of these would be a good buy only for a user who could fit it with a back to take, for example, 5 x 7 holders. It is to be remembered, of course, that almost any size of camera can be fitted out by an ingenious and workmanlike amateur to utilize films of almost any desired smaller size, so that the only disadvantage of the larger camera will as a rule be the practical one of extra bulk and weight. (Its price, indeed, will often be lower than that of some very tiny miniature; its lens and shutter equipment may often be of the very best.)

In reflex plate cameras to be bought new, the user is restricted to the *Graflex*, in 2¼ x 3¼ inch, 3¼ x 4¼ inch, and 4 x 5 inch sizes. In used condition there are sometimes some of the excellent British reflexes, often at prices below those asked for used *Graflexes*. These include the *Butcher*, the *Thornton-Pickard*, and the *Soho* (formerly *Marion Soho*). (The latter is one article which very nearly lives up to its advertising slogan, "the best camera in the world.")

The only European view camera generally available here is the *Linhof* (an excellent and finely finished instrument), usually found only in used condition. It comes in sizes starting with 6.5 cm. x 9 cm., and is ordinarily supplied with European-type holders; most models, however, can be adapted to take *Graflex* holders. Of the American-type view cameras, the smallest is 3¼ x 4¼ inch, which lacks some adjustments expected on a view camera. In the 4 x 5 inch, the 5 x 7 inch and larger sizes, there is a good choice. The new *Graflex* and *Glover* all-metal view cameras, although not tested by CR, appear to be of excellent quality.

Many view cameras are back-focusing; that is, the back is moved along the bed by the rack and pinion, while the front, holding the lens, remains stationary. This construction makes it easier to photograph a small object to a predetermined scale. It also permits the use of wide-angle lenses, since there is no chance that the bed might get into the lens field; front-focusing view cameras often take care of this by means of a drop-bed, that can

be moved out of the field of view when clearance is needed. (Some plate and film-pack cameras have rising and cross front, but few have "swings.") The rising and cross front movements are often useful in close-up work, in placing the image at the desired part of the plate. For the most part, however, these various movements are for the purpose of permitting the operator to change the rendition of perspective, for example, to keep the vertical lines of a building vertical and parallel in the picture. Similar considerations apply with small objects of definite geometrical shape. Mathematically, these various dodges actually result in distortion rather than correction of perspective. In many instances, however, as in the case of converging verticals of a building, the eye and mind refuse to accept the truth, and demand "correction."

* * *

The following and concluding article of this series will deal with the types and sizes of negative materials available to the amateur camera user.

Use Distilled Water, Not Tap Water, for Batteries

The picture above shows the results of a simple, reliable test for purity of the water that is added to maintain the water level in cells of storage batteries.

The three circles are shallow concave glass dishes upon each of which a 5 cubic centimeter sample of water (1 teaspoonful) was slowly evaporated, with gentle heat. On dish No. 1 which contained distilled water only, a very faint ring formation could be noted by the eye, though not visible in the halftone. Dish 2 shows the residue from 5 cc. of ordinary tap water having a low hardness (about 30 parts per million). The dish at the right contained very hard water, equivalent to quite hard city water in one of the prairie states (Kansas) of 500 parts per million hardness. Note the relatively great amount of solid matter deposited from water samples 2 and 3, as compared with No. 1. Anyone can apply this test to his own water supply or to what is sold as distilled water, using about enough water to fill about two-thirds of the diameter of the glass dish. A large watch glass will do very well as the container.

REPORTS indicate that service stations are commonly using ordinary tap water instead of distilled water for servicing batteries. *Distilled water* means water which is distilled by boiling it so as to convert it into vapor, then condensing the steam that passes off back to liquid in a separate, and thoroughly clean glass, porcelain, or enamelware container; by this process the impurities are left behind in the vessel in which the boiling is done, and the water that passes over as steam and is recondensed is almost 100% pure. Distilled water is *not* water which has been filtered or otherwise "purified" according to schemes that some service-station men have improvised to avoid the expense and trouble of distillation.

Copper and iron are both metallic contaminants that are harmful to storage batteries, iron particularly. Iron is, of course, found naturally in many public water supplies, and copper may be present either by solution from plumbing pipes or as copper sulphate, which is often used to "purify" the water supply in the reservoir. Nitrates, chlorides, and organic compounds derived from vegetable matter are also harmful when introduced into a storage battery; probably also the lime salts commonly found in hard water will harm a battery in repeated use.

The wise automobile user will make provision for stocking his own distilled water (or pure rain water collected in a porcelain, enamelware, or earthenware bowl, not from roof run-off). Automobile supply stores sell for a few cents a rubber-like cap and tube which fits over the neck of an ordinary bottle to facilitate filling a battery without spillage. Distilled water can be bought at drugstores, as a rule, when not obtainable from filling stations or automobile supply stores in bottles clearly and responsibly labeled, showing the bottler's full name and address. If there is any doubt as to the water being pure, distilled water, it is easy to test for purity by the simple method illustrated in the picture.

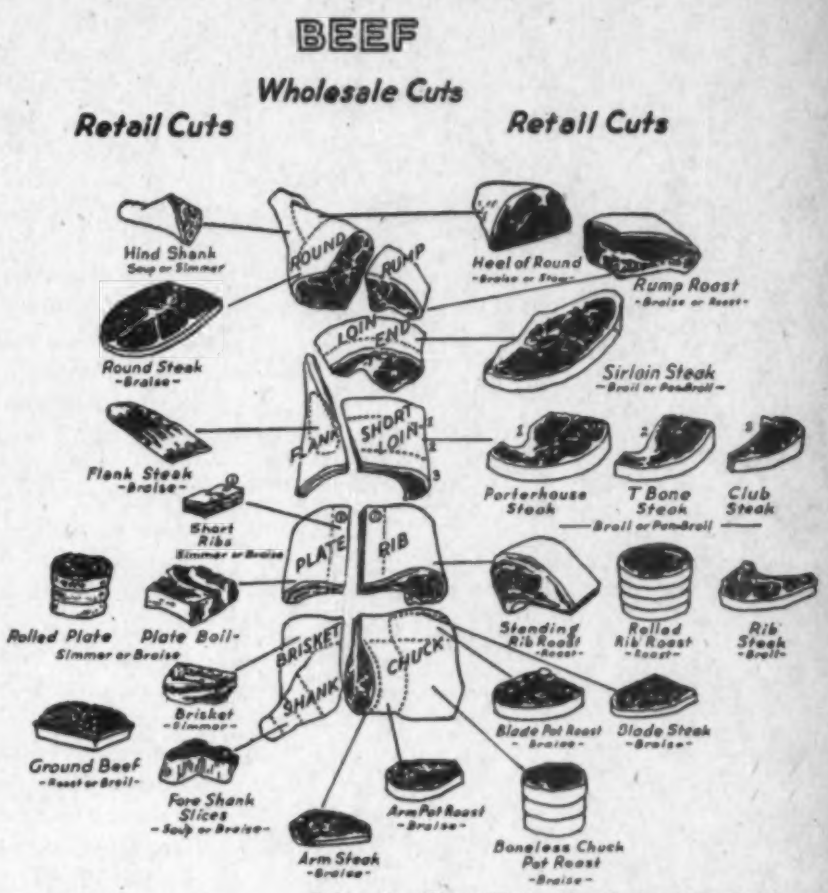
Consumers at this time cannot take too much care to preserve their storage batteries, and especially avoid all unnecessary causes of deterioration, such as the introduction of chemical contaminating substances, whether present in the water used to maintain the liquid level in the cell or in other ways. All impurities introduced into this liquid hasten the process of "self-discharge" of a battery. With many automobile batteries, such self-discharge is a serious problem. Tap water should be employed for replenishing of the liquid level in a storage battery only when not using it would result in the level of the liquid going below the top of the wood separators. That would be worse for the life of a battery than even the use of impure water for refilling.

Proper Meat Cookery

By B. W. GARDNER, JR., UNIVERSITY OF ILLINOIS

THE CONSUMER must endeavor to secure a maximum of satisfaction and a minimum of waste from the meat ration. By observing a few simple rules, this can be accomplished. Even tough cuts can be transformed into tender delicious meat dishes. These rules, too, help the consumer to enjoy all the juicy well-flavored goodness of the more expensive cuts of meat.

There are two general methods of meat cookery: (1) dry heat, and (2) moist heat. Tender cuts that have sufficient fat are cooked by dry heat. The less tender cuts, which contain more connective tissue, are cooked by moist heat, which breaks down the connective tissue and makes them tender. Roasting, broiling, and pan-broiling are three specific ways of cooking with dry heat. Braising, stewing, and simmering are methods utilizing moist heat.



Redrawn from Chart of National Live Stock and Meat Board

Beef chart showing the wholesale cuts, the more popular retail cuts from each wholesale cut, and how each retail cut is cooked.

Methods of Cooking

Dry heat methods of cooking are defined as follows:

Roasting is cooking on a rack in an uncovered pan in an oven. No water or fat is added.

Broiling is cooking on a rack in the oven above or below the heat unit (gas burner or electric unit). No water or fat is added.

Pan-broiling is cooking in an uncovered pan above the heat unit and keeping the fat drippings poured off.

The moist heat methods of cooking are defined as follows:

Braising is cooking slowly in a covered pan with a small amount of fat and a small amount of water.

Stewing is simmering small pieces of meat in water that just covers the meat. Vegetables may be added. Sometimes the meat is seared first.

Simmering is cooking in water at a low temperature of 185°-210°F.

The term *frying* is often used interchangeably with the term pan-broiling. This should be avoided because the terms do not have the same meaning. To fry means to cook in fat, either in (1) a small amount of fat, or (2) in a deep layer of fat. The frying of meat may be defined as browning the meat quickly in a small amount of added fat and then continuing to cook, *uncovered*, at a lower temperature. Frying is sometimes used to cook thinly cut steaks, chops, liver, and pork chops. This method of cooking meat sacrifices some of the tenderness of the meat. The meat, however, will have a crisp brown exterior and the flavor may be superior.

Choosing the Right Methods

It is important to use these cooking methods on the right meats. When cooking with dry heat the meat should grade U.S. Good or better. This means that there should be sufficient finish or fat on the cut to keep it from drying out while

Redrawn from Chart of National Live Stock and Meat Board

Pork chart showing the wholesale cuts, the more popular retail cuts from each wholesale cut, and how each retail cut is cooked.

cooking. Because veal has only a small amount of fat, the small cuts, such as steaks and chops, are never cooked with dry heat. If meat is to be cooked by dry heat, it must be one of the more tender cuts. In beef, this includes those retail cuts that come from the wholesale cuts known as rib, loin, and rump. It also includes the inside round steak from the wholesale cut round. With lamb, the rib, loin, shoulder, and leg are wholesale cuts that furnish retail cuts that can be cooked by this method. With veal, the wholesale cuts loin, round, or leg, and shoulder furnish roasts that can be cooked by dry heat. The cured products of pork such as ham and bacon may be cooked with dry heat at a low temperature. Large cuts of pork such as shoulder, loin, and ham may be cooked by this method *but must be cooked well done.*

All the smaller cuts of fresh pork are cooked with moist heat. Practically any cut of meat *may* be braised. However, all the less tender cuts should be braised. This includes all the retail cuts from those wholesale cuts not discussed under the dry heat method of cooking. The charts shown with this article will help the consumer to locate the various retail cuts, the wholesale cuts they come from, and to know how to cook them. It should be remembered that in addition to cooking less tender cuts of meat with moist heat so as to break down the connective tissue, all those cuts that lack the finish to keep them from drying out should be cooked by this method.

Roasting

When roasting meat there are two important things to remember: (1) use a meat thermometer, and (2) roast at a moderately low oven temperature (300°-350°F). The meat thermometer is the only satisfactory and accurate method of telling when a roast is done. There are several types of thermometers on the market. They are all used in the same way. A small metal skewer, shown in Figure 1, is used to make a hole into the center of the largest muscle. The thermometer is then inserted until the bulb reaches the center of the roast as is illustrated in Figure 1. As the meat cooks, the internal temperature of the roast rises. This rise is registered on the thermometer which may be calibrated in degrees, or as "doneness" of a particular kind of meat, or both.

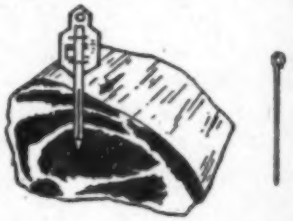


Figure 1. Cross section of a roast showing the correct way to insert the meat thermometer. (Editor's Note: Sears-Roebuck's Thermometer, Cat. No. 4-2933, 98c, is a recommended meat thermometer. Two thermometers rated B were Montgomery Ward's Airguide, No. 57-9318, 87c, made by Fee & Stemwedel, and Taylor Instrument Co.'s No. 5936, $1.50, made by Taylor Instr. Cos., Rochester, N. Y.)

Time tables for roasting, which are based on a time-weight relation, may be used. There are several factors, however, which prevent these from giving completely satisfactory results. Smaller roasts usually require more minutes per pound than large ones. The shape of the roast as well as its size will cause variations. Variation in oven temperature and the degree of doneness desired will also prevent the consumer from securing as uniform and desirable results as can be obtained by the use of a meat thermometer. For the consumer who does not own a meat ther-

mometer and cannot obtain one until after the war, a time table for roasting is included in Table 1. The correct oven temperature and the internal temperature of the roast when it is done are also given.

Roasting at a low temperature prevents losses due to excessive shrinkage. It is important to roast at a low temperature for this increases the palatability of a roast. The roast will be plumper, and the fat a crisp golden brown, with less loss of the meat juices. Figure 2 shows a roast cooked at a moderately low oven temperature of 300°F. The roast shown in Figure 3 has a very unpalatable appearance because of the shrinking and charring of the muscle fibers, the charring of the bone, and the excessive loss of meat juices or drippings. The fat has a brittle blackish appearance due to the high oven temperature of 450°F. Although the roast cooked at a higher temperature gives more drippings, the gravy made from these drippings will not be as palatable as that made from the drippings of the roast cooked at a moderately low temperature. In addition to the losses to the roast itself, cooking at a high temperature requires more fuel. This is an important consideration in the national wartime fuel conservation program.

Broiling and Pan-Broiling

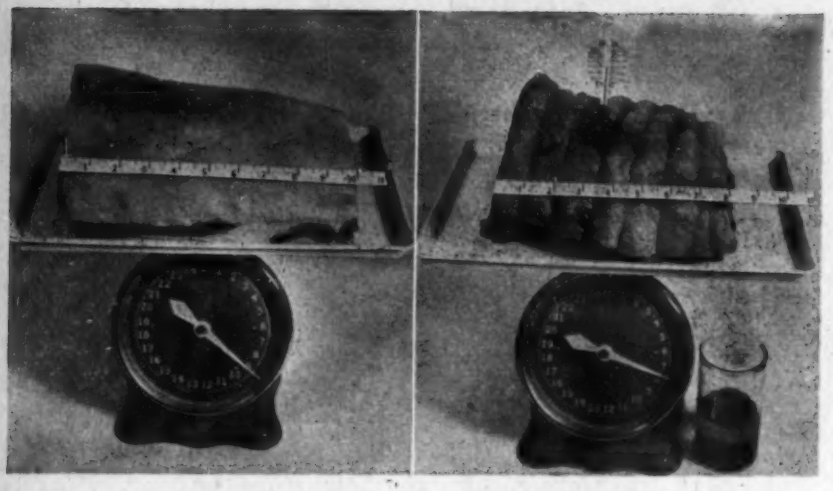
Broiling and pan-broiling steaks and chops require a moderately low temperature as in roasting (350°F). The second important thing to remember when broiling is that the steak or chop must be thick enough to allow the exterior to be sufficiently brown before the center has reached the desired degree of doneness. This prevents an undesirable drying out. Steaks should be cut from one to two inches thick, lamb chops at least three-quarters of an inch thick, cured ham slices an inch. A meat thermometer may be used on thick steaks if desired. When broiling at a low temperature, best results will be obtained by turning the meat only once. This should be done when the meat is nearly half done. A time table giving the approximate time required for broiling various steaks and chops is shown in Table 2.

Table I—Recommended oven and internal temperatures with time table helpful in roasting when oven temperature is not measured and controlled.

Roast	Oven Temperature	Internal Temperature	Approximate Minutes per Pound
BEEF	300°F		
Ribs (Standing)			
Rare		140°F	18-20
Medium		160°F	22-25
Well Done		170°F	27-30
Ribs (Rolled)		*	Add 10 minutes per pound to the above
Chuck		150°-170°F	25-30
Rump		150°-170°F	25-30
PORK (FRESH)	350°F		
Loin Roast		185°F	35-50
Boston Butt		185°F	45-50
Shoulder			
Whole		185°F	30-35
Boned		185°F	35-45
Ham		185°F	30-35
PORK (CURED)	300°F		
Boston Butt		170°F	35
Picnic		170°F	35
Ham (Whole)		170°F	25
Tenderized Process Ham		160°F	15
Half Ham		170°F	30
LAMB	300°F		
Leg		175°-180°F	30-35
Shoulder		175°-180°F	30-35
Shoulder (Boned)		175°-180°F	40-45
VEAL	300°F		
Leg or Round Roast		170°F	25
Shoulder		170°F	25
Shoulder Rolled		170°F	40-45

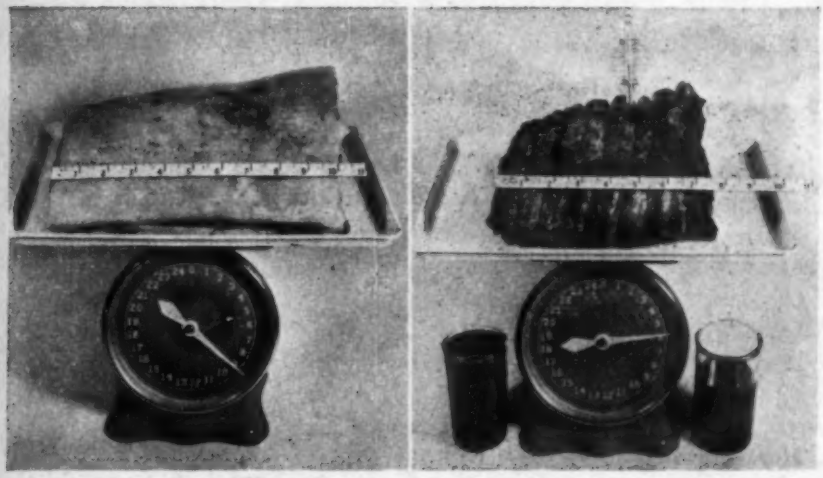
Braising

Braising is a method of cooking less tender pieces of meat so that they will be tender and juicy with a nicely browned exterior. Meat that is braised is always cooked well done. It is essential that the cooking utensil which is used for braising have a tight fitting lid. A rack should be placed under the meat to keep it from becoming too brown and dried out on the underneath surface. Cuts of meat that are to be braised are usually browned first and then cooked slowly at a moderate temperature of 300°F to 350°F. A heavy iron or aluminum kettle is best for pot roasting. A heavy iron frying pan with a tight fitting lid should be used for braising steaks. A little fat is usually added to the braising pan unless the piece of meat is very fat. A small quantity of water may be added if desired. Breading of steaks and chops is very popular when they are cooked by braising. This also helps keep the flavor within the cut of meat. Flouring also is a



Courtesy of the National Livestock and Meat Board

Figure 2. Effect of cooking at a moderately low temperature. Note the plump full desirable appearance of the roast and the minimum of drippings.



Courtesy of the National Livestock and Meat Board

Figure 3. Effect of cooking at a high temperature. Note the undesirable burnt appearance, the excessive shrinkage, and the large amount of drippings.

Table 2—Time table for broiling at a moderate temperature (350°F).

Cut	Approximate Cooking Time Medium Done Minutes
BEEF	
*Rib Steak, 1 inch thick	20
Rib Steak, 2 inches thick	45
*Club Steak, 1 inch thick	20
Club Steak, 2 inches thick	45
*Sirloin Steak, 1 inch thick	25
Sirloin Steak, 2 inches thick	45
*Porterhouse or T-bone Steak, 1 inch thick	25
Porterhouse or T-bone Steak, 2 inches thick	45
LAMB	
Shoulder Chops, 1 inch thick	12
Rib Chops, 1 inch thick	12
Loin Chops, 1 inch thick	12
PORK	
Cured Ham Slice, 1 inch thick	30
Bacon	4 to 5 minutes†

* When using a meat thermometer, rare steaks are broiled to an internal temperature of 130°F; medium 160°F.

† The time for broiling bacon is influenced by personal preference as to crispness; relatively slow broiling favors evenness of color and flavor and reduces likelihood of burning at edges.

desirable practice when braising. Table 3 gives the approximate cooking time required to braise some of the more popular cuts of meat.

One of the benefits of braising meat is the savory gravy that can be made. A large part of the meat extractives or juices come out of the meat in braising. This excellent meat flavor which would otherwise be lost can be retained by serving the gravy over the meat. The gravy also adds a great deal to the meal when served separately.

By using various kinds of stew a considerable variety may be added to the diet. The meat is cut into small pieces and simmered. Vegetables may be added. Brown stew is made by browning the meat before the water is added. This process is omitted when making light stew. The cardinal principle to remember when cooking in water is to keep the water *at a simmering temperature*, which is not boiling but 2° to 25° lower or about 185°F to 210°F. *Meat should never be boiled.* When meat is simmered slowly it does not become stringy and dry; it is much easier to carve. Furthermore with simmering, much less of the food value of the meat is lost into the water.

Table 3—Time table for braising at a moderately low temperature.

Cut	Weight or Thickness	Approximate Cooking Time
BEEF		
Pot Roast	4 lb.	3 to 4 hours
Swiss Steak	2 inches thick	2 to 3 hours
Short Ribs	2 x 3 x 4 inch pieces	90 minutes
Round Steak	¾ inch thick	60 minutes
PORK		
Chop	1 inch thick	60 minutes
Spare Ribs	2-3 lb.	90 minutes
Boston Butt Slice	1 inch thick	60 minutes
LAMB		
Rolled Breast	2 lb.	2 hours
Neck Slices	¾ inch thick	60 minutes
Shank	½ lb.	90 minutes
VEAL		
Rolled Breast	3 lb.	2 hours
Chops	¾ inch thick	60 minutes
Steaks or Cutlets	¾ inch thick	60 minutes

Veal chops or cutlets breaded require the same length of time for broiling as the above.

Redrawn from Chart of National Live Stock and Meat Board

Lamb chart showing the wholesale cuts, the more popular retail cuts from each wholesale cut, and how each retail cut is cooked.

Soup may be made by preparing it in a covered kettle or by the use of the pressure cooker. The latter method is much preferred; the soup will be richer and have more food value. While the water content of soup is high and the food value low, it is an excellent way to get some value from the bones that must be purchased in the consumer's meat ration.

Well Said, and Timely—National Association of Secondary-School Principals

EXPLORATORY STUDIES and numerous interviews have already shown that of the people who have hitherto been concerned with consumer education, many fall into two general classes: some who wish to use the schools for promoting interests of business, and some who wish to use the schools to reform the economic structure of our society. The Committee in charge of the proposed study will carefully guard against lending itself to advance the interests of any business enterprise; on the other hand, it does not conceive its function to be the reform of our economic structure. The study will endeavor to aid the schools in their effort to make youth more intelligent, conscientious, and effective consumers in the society in which they live. It is hoped that consumer education will do more than give to individuals information that will lead to their getting more for their money; it should also help them to acquire a sound understanding of the fundamental principles of economics so that their purchases will be not only most profitable to themselves but also contribute to the maintenance of sound business and the long-run best interests of all.

—From the announcement of a three-year study of consumer education to be undertaken by the National Association of Secondary-School Principals.

To readers of CR BULLETINS who wish to see a fuller discussion of this subject, particularly teachers, executives of teacher-training institutions, and state and local school administrators, Consumers' Research will be glad to send out, free on request, a tearsheet of the editorial in the November 1941 issue, entitled *Economic Education, or Propaganda for "Causes"?*

Fertilizer for Your Victory Garden

IN ORDER to obtain the highest possible yield from your garden, it is necessary that the soil be made fertile by the application of suitable fertilizer to replace the plant food elements which are lacking or deficient or have been taken from it in the past. The question which immediately occurs to the amateur gardener is, "How can I determine what my garden soil lacks?" Reading his gardening catalogs or the gardening section of his newspaper, he may have noticed advertisements of soil testing kits and, quite excusably, may believe that these give an answer to his problem. Unfortunately, such is not the case, for, in the hands of the average gardener, such kits do not give reliable indications.

Instead of wasting money on the purchase of such a kit—and the money usually would be wasted—a sample of the soil should be taken from the garden and submitted to the State Agricultural Experiment Station. In order to obtain a representative sample, it is necessary to take soil from several parts of the garden from various depths between three and six inches. The various samples should all be mixed together thoroughly and from this mixture the final sample to be tested taken. The Experiment Station will then advise, in states where this service is regularly afforded, what elements are deficient in the soil and what type of fertilizer would be best to use.

Animal manures are of course excellent, for their use represents putting back much of what was originally taken from the soil, but they will not be economically or readily available in sufficient quantities for city and suburban dwellers. Chemical fertilizers, however, will be available. Phosphate and potash mixtures are available without restriction, but these, when used with animal manures or composts on most garden soils except mucks, should have twice as much phosphorus as potash. Thus the 0-14-7 and 0-20-10 mixtures are better than 0-14-14 or 0-20-20.

The complete chemical fertilizers are sold with different proportions of the three essential elements: nitrogen, phosphorus, and potassium. For example, a 4-12-4 fertilizer contains 4 lb. of total nitrogen, 12 lb. of available phosphoric acid, and 4 lb. of water-soluble potash in 100 lb. of fertilizer.

At least 14 elements are required for plant growth, but the three elements previously mentioned are those most commonly deficient in soils, and the application of a fertilizer containing them in the correct proportion is usually effective. The nitrogen is required by the plant, particularly in its early stages, to form plant protein, and, like phosphorus, is essential to growth. The potassium is essential for carbohydrate production and assists the plant to utilize air, sunlight, and water. Nitrogen is the most expensive fertilizer element, and because it is used in the manufacture of explosives, there will only be limited amounts available for garden fertilizers. Recognizing this, the War Production Board has issued an order prohibiting the use of chemical nitrogen on lawns, golf courses, parks, cemeteries, waysides, and non-commercial planting of trees, shrubs, and flowers. However, organic nitrogeneous products, such as bat guano, chicken manure, etc., are permitted.

The only grade of fertilizer permitted to be sold for home gardens is a 3-8-7 mixture known as Victory garden fertilizer. This will, it is understood, be generally available but expensive. (One price quoted CR was $3.40 per 100-lb. bag compared to $1.70 which farmers pay for 4-12-4.

Those who plan to have a garden next year should take special care to save and utilize all possible materials which contain nitrogen: all healthy plant garbage, leaves, and straw should be saved and composted. Small amounts of other garbage, including meat scraps and milk residues, can be used in this way where conditions permit and the odor would not be a problem. The compost heap should be piled up and kept damp and worked over from time to time to prevent heating. If there is an ammonia odor, nitrogen is being lost, and this can be corrected and the nitrogen reabsorbed to some extent by placing the compost material between alternate layers of soil. The chemical reaction for composting leaves and other organic material requires six months to a year or more to complete, hence at the earliest the material would not be available for use until towards the end of the growing season.

Fertilizer pays many times over, if properly distributed into the soil. Two-thirds of the amount used should be placed in the bottom of the spading trench and one-third in a shallow trench about two inches away from the plants.

THE MAN WHO'S HIS OWN LAWYER

Editor's Note: The accompanying is presented because of the average consumer's general lack of understanding of the problems of wills and bequests, and because at least once (and sometimes several times) in one's lifetime such matters become of vital importance to everyone. Present economic conditions are such that many existing wills may call for revision. *This article is decidedly not to be taken as advice to anyone on how to draw his own will.* First, because the article is based chiefly on the New York law of inheritance, which differs in many respects from laws of other states. (Both principles of law and details of administration differ widely in different states of the Union and the framing of provisions of a will which may be perfectly good practice in one state, might cause the most serious legal difficulties in another.) For the layman, the most that can be done in discussing wills is to show what cannot be done, or what kinds of provisions may at some times and in some jurisdictions lead to difficulty. The detailed mechanics by which these difficulties can be avoided are such that only a lawyer can deal with them,—a lawyer with experience in the laws of the state where the testator is domiciled. There are many questions involved, including tax and other considerations, with none of which the layman can safely deal. Some depend not only upon the laws, but the rules of practice of your particular state. The services of a lawyer are, therefore, essential in drawing any will, and his fee, which may run to about $5 for a fairly simple document, will be an expenditure well worth while in saving unnecessary litigation and expense to heirs, and above all, in insuring that the testator's wishes will be carried out substantially as expressed by him.

Do YOU know what happens to your property when you die? Everyone knows that "you can't take it with you," but do you know what actually happens to it? If you answer that it goes to your heirs, do you really know what *that* means? Who are your heirs? Are they your wife, your children, your parents, your brothers and sisters, or the State? Are your heirs always the same, or do they differ under different conditions? How does your property pass after your death to the people you have selected to receive it? If these people are not your "heirs" in a legal sense, how do you manage to keep your property out of the possession of your heirs and get it into the hands of the people you picked out to receive it? Is any one plan of leaving your property better, more economical, less troublesome, or more advantageous than any other method?

If you have to answer any of these questions by saying you don't know, you should take the trouble to inform yourself. Every intelligent man owes it to himself, his family, and his "heirs" to know something of the operation of the law with respect to such property as he may leave when he dies. If you don't know the rules, and don't know what happens, the chances are that such property as you leave will pass, on the one hand, to people in whom you are not particularly interested or, on the other, to people you desire to leave it to, but not in the proportions you would have provided.

Most of the difficulties likely to occur with respect to the inheritance of small estates after a man's death can be eliminated and all questions avoided by the simple device of drawing a will. The rules governing the preparation of wills are of the most technical nature, but, if they are complied with, the result is an expression by you of your desires with respect to the distribution of your property after your death which the law will undertake to see carried out. You may, if you wish, name in your will the people under whose supervision you want your estate distributed. Or you don't have to name anybody, but if you don't, the court will name one of your near relatives, and, in order properly to protect your estate, the person named by the court may have to supply a bond—at a not inconsiderable expense—guaranteeing that he will carry out your wishes exactly. If, on the other hand, you yourself name the persons who are to supervise the distribution of your property, you may provide that they need not give any bond. In that event, no bond will be exacted. Your estate will be saved the expense of the bonding fees and the distribution of your property will be handled with more speed and less red tape.

What all this means is that a person who has accumulated property should not fail to make a will providing for disposition of his property in accordance with his wishes, to be carried out in the simplest, least expensive, and most expeditious manner. If the man, in addition to having accumulated some property, has also accumulated a wife and children, the preparation of a will by him is even more important. If a citizen of New York State dies leaving no will, the law is that one-third of his property passes to his wife and the remaining two-thirds is divided equally among his children. If his children are less than 21 years old, they may not lawfully receive any share of the estate themselves. The children's shares must be paid to their guardian (who may also be named in the will), whose duty it is to hold it for the children until they are 21. To ensure the faithful performance of this duty by the guardian, a bond is required (unless he is named in the will and his bond dispensed with by the terms of that instrument), a separate one for each child, on which annual premiums are payable until the child attains 21. If the person who died left a number of children, all young, the expense of bond premiums on

all the bonds until *all* the children reach 21 may amount to a substantial portion of the estate. This instance is given not because these New York provisions have their close counterpart in other states, for they may not, but because the illustration clearly shows how complex the problem of proper framing of a will may be and how necessary it is to know and be forewarned against needless expense and trouble that heirs may be put to by negligence of a person whose property is to be divided.

If the man who died left a wife but no children, under the laws of New York his wife gets only one-half of his estate and the residue goes to his parents, if they are living, or, if they are not, to his brothers and sisters. This is almost never the intention of the man who died, but it comes about because the State has, in effect, said to its citizens, "You may, by means of a will, order almost any distribution you care to of the property you own at the time of your death, but if you die without having left any instructions with regard to this distribution (i.e., without having left any will) you will be deemed to have intended your property to be distributed as follows..." Then there is set forth a code of rules to govern the distribution of an estate in case of intestacy (dying without leaving a will) of which the above rule providing for the division of an estate of a childless married man between his wife and his parents is one. Most people know of the existence of such rules but not of their content, and they therefore feel that drawing a will is comparatively unimportant because the State has provided for the distribution of any property they may leave.

One of the most serious consequences resulting from the death of a married man intestate is that the property which goes to his children and is held for them by a guardian may not be available to his widow for the education and maintenance of the children without court permission. The duty of the guardian, even if such guardian be the children's own mother, is to preserve for the children, until each of them becomes 21, their portions of the father's estate. But if the income from the children's share, or even part of the principal of the share, is needed by their mother to help her support the family, it may often not be available to her unless she applies to the court and obtains permission to use that money. To obtain that permission, she must show the need for its use, which means setting forth fully her own financial position and that of the children, as well as what will be needed for her support and theirs during the coming years—a procedure which not infrequently proves embarrassing and is always expensive.

When you are drawing a will, have it drawn right. The old adage says a man who has himself for a lawyer has a fool for a client. Nowhere is the truth of this more apparent than in connection with a homemade will prepared by someone not a lawyer.

Booklets on Drawing Up Wills

People are realizing more and more the importance of making wills, and a number of booklets have appeared intended to make will-drawing easy for the layman. While these booklets admit that the use of a lawyer would be advisable, they all, either openly or by implication, try to convey the idea that drawing a will is really quite a simple matter and, unless complex situations are to be covered in the document, no special skill or training is necessary. That anyone who knows how to write the English language can draw a will, is the clear implication of the booklets, and for those who lack confidence in their ability to write English properly, the booklets conveniently and condescendingly include specimen paragraphs which, presumably, cover all the ordinary contingencies that have to be provided for.

Wills for Men in the Services

Members of the armed forces quite frequently draw up holographic wills in the belief that they are perfectly valid under all circumstances. (A holographic will is one drawn up wholly and dated and signed in the handwriting of the person making it.) The holographic will at best must be regarded only a temporary or emergency measure. The New York law regarding such wills was recently amended and in substance states "any person in military or naval service or mariner while at sea, irrespective of his age, may validly and effectively dispose of his real or personal property by a verbal statement of his wishes made in the hearing of, and proved by, two witnesses, or written in his own hand without attestation, provided the genuineness of his handwriting is proved, but that any such disposition will lapse and become ineffective after the expiration of one year following his discharge from service provided he possesses testamentary capacity at that time, or within one year after he shall have regained his testamentary capacity if mentally incapacitated at the expiration of such year." It seems probable that other states may adopt similar amendments, if they have not already done so.

Nevertheless, it would seem that holographic wills should be made only as a last resort, unless the person making the will has certain knowledge that it will be valid in the state in which he normally resides.

WILLIAM S. WEISS

NOTE: *The concluding part of this article will appear in a future issue of the* BULLETIN.

Extracting the Most from Your Coffee Ration

By HARRY G. PARKER, DEAN OF INDUSTRY (RETIRED), PARK COLLEGE, PARKVILLE, MISSOURI

The invention by Dean Parker described in the following article has received much publicity in Kansas City papers. By applying well-known principles of chemical laboratory practice, Dean Parker has been able to devise a method in which a maximum "yield" can be gotten from one's ground coffee when making the beverage. The essence of his method is to catch the vapors and condense them, and return the condensate to the liquid. By this ingenious method, the aroma is restored to the beverage rather than permitted to escape into the room—obviously a good idea in these days when we cannot afford to waste any of our coffee, even for the purpose of making pleasant breakfast odors in the kitchen and dining room. The flavor of coffee made by this method is different and more "authoritative" than that of coffee made by customary methods. Some may like it better. Others may regard the change as a reasonable price to pay for being able to double the yield of beverage per ounce of ground coffee.

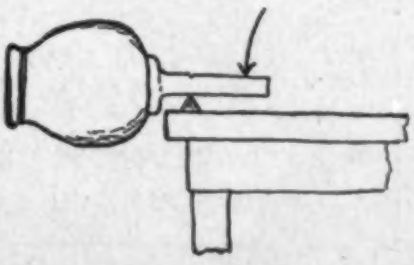
THE PINCH of war is upon us. The coffee ration amounts to less than a half ounce a day. This is not much for those who really like coffee. To re-boil the coffee grounds, as has been suggested in certain high quarters, is a wash-out. There should be a better way to get all the good out of the coffee bean.

The flavor of coffee depends largely upon an oily extract, which comes out but slowly by the drip or percolation process. Boiling extracts this oily substance more quickly and thoroughly and has long been recognized as a means of obtaining stronger coffee with a given amount of the coffee bean, but unfortunately boiled coffee is apt to be flat and bitter. The aroma of boiling coffee on a cold morning in winter is one of the most delightful sensations that can titillate the nostrils of a hungry man. It is evident, however, that if the aroma is out in the room, it is not in the coffee pot. This is all very well if we wish to smell the coffee, but to drink the flavor we must contrive some way to get the aroma back into the pot. Can this be done? Most assuredly.

The chemist comes to our rescue. When he wishes to save a volatile extract from a boiling liquid he attaches to his distilling flask what he calls a return condenser, which is merely a device for cooling the vapor and returning it to the boiling liquid. If we can do this we should retain the goodness of the coffee and have the advantage of the efficiency of the boiling process. To bring about this happy result we may proceed in several ways, but the following method is recommended as simple and practicable for the average kitchen.

Obtain one of the glass coffee makers, of which there are many on the market. The spout of the upper vessel is too long for our purpose. It may be shortened in the following manner: With an ordinary three-cornered file, such as is commonly used for sharpening saws, file a notch in the hollow glass stem of the upper vessel about an inch and a half from the neck. Place the stem on the upper edge of the file exactly opposite the notch and give the stem a sharp tap with anything handy. The back of a carving knife is convenient. The glass will break smoothly at the notch. The sketch below shows the process. Smooth up with a file or sandpaper any sharp edges that may exist and you are all set for making coffee the new way.

Next, place the ground coffee in the lower vessel, using considerably less than the amount usually specified for a given amount of water, say about half. The upper vessel is now to be used to catch and condense the vapors from the boiling coffee. To help in the condensation it is well to cover the upper vessel with a lid. This lid may be a small dish or bowl containing cold water. In the illustration, Figure 2, the cover is a custard cup of oven-ware glass. A metal finger bowl is excellent. A good fit of the bottom of the bowl around the rim of the upper vessel is desirable, so as to minimize loss of vapor to the outside.



The coffee should be heated to boiling. If desired, boiling water may be used to begin with. This saves time. When boiling begins the heat should be moderated so that the vapor is all condensed. If you can smell the coffee in the room some of the extract is getting away from you. The boiling should not be mere simmering, but real bubble boiling. The formation of bubbles of steam in the coffee does the business. The chemist calls this "steam distillation" and often uses the process in the laboratory where it is desired to extract a volatile oil from an aqueous liquid.

If you are interested in the theory of the process you can look it up in any good chemical textbook. Suffice to say, the bubbles of steam are extremely effective in getting out the oily extract upon which the flavor of coffee so largely depends.

How long should the coffee boil? That depends on your taste and the grind and quality of the coffee used. Try it out for yourself. "Drip-grind" coffee will give good coffee in ten minutes, better in twenty and better still in half an hour. "Regular grind" coffee may be boiled an hour with advantage. To boil coffee for this length of time is rank heresy to most cooks, but if the oily extract in the steam is returned to the coffee, long boiling does no harm. Personally, I have tried boiling coffee steadily for two hours by the clock and have achieved excellent results. It is not the boiling, but the loss of the oily extract accompanying boiling as usually conducted that ruins the coffee. Boiling by the new method brings out a strength and flavor that makes drip or percolated coffee seem weak and anemic, unless a much larger quantity of coffee is used.

If the "regular grind" coffee is used the coffee may be poured from the lower vessel into the cup just as from the old-fashioned coffee pot. Drip grind coffee needs filtering. To do this, line the upper vessel with a cloth and use it as a funnel, pouring the coffee through the cloth. Have the cloth large enough so that the entire amount of coffee in the lower container may be poured in at once and allowed to filter while you attend to other things. A variety of utensils may be employed for this form of coffee

making, which are not given here, but this one is the most simple and practical for the average kitchen. The glass is an advantage as you can see what you are doing and regulate the heat properly.

Coffee made in this way keeps much better than usual. Any left-over should be poured off the grounds into a flask or bottle and corked. The surface of the liquid should be as small as possible to prevent escape of the vapor into the air as would be the case if a shallow vessel were used. All the vessels must be washed thoroughly. Water is not enough. The extract is oily. Use soap suds and a brush. The writer is not financially interested in any form of coffee maker and will not patent the process. It is offered freely, as a contribution to the general good during the war shortage to all who wish to use it.

BUY WAR BONDS AND STAMPS

Any Pots

YEARS AGO, in old-time America, "any pots to mend?" was the familiar cry of the traveling tinker, but before the war came, American housewives had gotten into the habit, unlike the thrifty Europeans, of simply throwing away their pots and pans whenever a hole developed. The result was that the tinkering trade disappeared, and few are left who know how to make even most ordinary repairs on cooking utensils.

Soon, we may be unable to replace aluminum or agate-ware utensils, and must either repair the ones we have or turn to earthenware and glass substitutes. There are several ways in which pots and pans used primarily for boiling can be repaired: (1) by the application of a patented screw-in patch called *Mendets*, made by the Collette Manufacturing Co., Amsterdam, N. Y.; (2) by the application of a liquid cement; (3) by soldering. A fourth method which has possibilities, but which at the present time is too expensive for home use, involves the use of a small welding outfit which may be plugged into an electric light circuit. At present such units sell for about $20, but it is to be expected that in a reasonable time, if materials are made available for their manufacture, the price will be lowered to a point which would make them practicable for ordinary use in the home.

Mendets, which have been in use for many years, are sold in the five-and-ten-cent and hardware stores. Four assorted patches, with a little wrench for tightening, come on a card at 10 cents. Each patch con-

to Mend Today?

sists of a thin cork washer and two metal washers, one of which has a small bolt fastened to it. To repair a leak, the patch most suitable in size is selected and the hole in the utensil enlarged sufficiently to permit the bolt to pass through. The cork washer is placed on the metal washer to which the bolt is attached, and the assembly placed over the hole in the inside of the pan with the bolt passing through the hole. The remaining washer is then placed over the bolt on the outside of the pan, then the nut screwed on and tightened up. The bolt may have to be shortened somewhat with a pair of nippers so that it does not project too far.

The *Mendet* device definitely stops the leak, but has two important disadvantages. If the leak is on the bottom of the pan, as it usually is, the nut sticking out is inconvenient, as it makes the pan wobbly, may scratch a table or other surface on which it is placed, and, if used on an electric stove, prevents the bottom of the pan from making good contact with the heating unit (hence interferes with efficiency in absorbing heat). The patch on the inside of the pan is difficult to clean, with the result that food cooked in the utensil tends to soak in and around the cork and decay and impair the flavor of food subsequently cooked in the pan, in some cases might contaminate it bacteriologically. If the pan is one which can be spared from general use and reserved for boiling water, and potatoes, and some other vegetables where only clean water comes into contact with the patch, the *Mendet*-type of patch will often be satisfactory.

Another type of pan repair is made by a liquid cement, possibly a dissolved rubber, *So-Luminum Metal Mender*, made by the So-Lo Works, Cincinnati, Ohio, sold for 10c a small tube. A complaint against this firm for false, misleading, and deceptive statements has been issued by the Federal Trade Commission. In reply, the firm maintains that "*So-Luminum*, as advertised, is the only plastic metal mender that will withstand heat. . . .and that the claim that the product 'makes a safe, permanent, air-tight mend. . .' is correct, with a possible exception to be made in the use of the word 'permanent.' "

CR's tests reveal that the product has some merit. The area around the hole to be repaired requires thorough cleaning with sandpaper, and a small quantity of *So-Luminum* is spread over the hole and allowed to dry for 24 hours. An aluminum pan was quickly and easily repaired in this manner, and it withstood boiling water and weak acids. It is not, of course, strictly permanent, and with stirring, small bits of the patch can come off; in this way, by attrition, the patch would likely in time be worn away and have to be replaced. This cement would seem to give a fairly satisfactory repair on utensils for food not requiring stirring, particularly if the repair is inspected at frequent intervals, and the patch removed and replaced at the first sign of any loosening. The method is, of course, suitable only for the repair of rather small holes.

Soldering, except possibly for aluminum utensils, is probably the most satisfactory method of repair, but it is not readily applicable to all types of pans. It works easily of course on "tin" or sheet-steel utensils. In agate- or enamelware, it is necessary to remove the enamel or agate from around the hole to be repaired in order to expose the iron base. If the hole is large, or the material is very thin, a copper washer can be placed over the rivet before riveting is done. It must be remembered that from a contamination standpoint, the use of chipped or corroded enamelware will always present some risk and such utensils should certainly not be used for general cookery, but only for boiling water and similar uses. Soldering over the rivet *on the outside of the pan* is recommended, and will result in a more permanent and sanitary repair. To solder iron successfully requires the use of a killed-acid (chloride of zinc solution) flux.

It is doubtful whether aluminum can be soldered permanently by any method available in the home, for even with carefully executed work, it is said that after considerable time, the solder will eventually separate due to the action of corrosion. The Bureau of Standards reports that the "difficulty with soldered joints on aluminum is that the aluminum adjacent to the joint corrodes when the object is exposed in a moist atmosphere as a result of 'galvanic' action between the dissimilar metals—the solder of the joint and the adjacent aluminum. This action can be prevented to a certain extent by covering the joint with a moisture-proof paint or varnish," a method obviously not applicable to repair of pans or cooking utensils. Commercial aluminum solders available

for household repairing of utensils are: *Kester Aluminum Solder* (Kester Solder Co., Chicago) and *Supreme* brand aluminum solder (Modern Metal Products Co., 18 Ames St., Cambridge, Mass.).[1]

As to aluminum solder, the recommended formulas for these contain tin and zinc and should not include lead, but under present conditions of shortage of tin and certain other metals, one cannot, perhaps, be certain as to the absence of lead from any such repair material. As to the solders used for soft soldering materials other than aluminum, those are invariably tin-lead alloys and of course contain high percentages of lead; they would thus be distinctly poisonous in contact with foods. With tin-lead solder, contamination of food or liquids is almost certain to occur to a serious extent at the high temperatures of cooking. On this account, in every case where a tin-lead solder is used to repair a cooking utensil, *the solder must be on the outside*, and any area of solder exposed on the inside either be very small or protected by a covering of a less toxic metal as suggested in copper-rivet method of repair already discussed in connection with agate or enamelware utensils. (Pure or nearly pure tin which might be used for soldering of utensils is, of course, not available for other than military or other highly essential factory uses.)

Soldering is an art that every householder or handy man should learn, and fortunately there is one bulletin that gives an exceptional amount of useful and convenient information on the subject. That is the Cornell Extension Bulletin 57 (Cornell University, Ithaca, New York), originally published in January 1923, and now in its tenth printing. This bulletin, sold at 5 cents, gives extensive details of all ordinary soldering practices. As it is well organized and practical, a copy should be in every school and college library, and in shops where soldering is done regularly or occasionally. A briefer and somewhat more technical bulletin on the subject is Bureau of Standards mimeographed Letter Circ. LC-701. Persons evidencing important need for this may obtain it on application to National Bureau of Standards, Washington, D. C.

[1] Both *Kester* and *Supreme* brand aluminum solders were recently tested chemically for CR, and no significant quantity of lead was found in either. *Kester* aluminum solder is no longer being made for consumer use.

Off the Editor's Chest

[*Continued from page 2*]

vised to reduce the sales appeal of shoes, particularly to women buyers, have also been put into effect. As far back as last November the taking of such a step was forecast by an OPA official who said in a speech that rationing of shoes was in order "*not because of leather shortage . . .*, but because in controlling inflation *you must not leave loopholes for excess spending*. Today the loopholes are food and clothing." [Italics ours—CR.]

The second factor interfering with adequate production of goods for consumers is the matter of price ceilings. Many consumers, who have not given much thought to the problem, have simply taken it for granted that when price ceilings were imposed on many items, prices would in fact be kept down to a level comparing favorably with those of pre-war days, and that quality and quantity would not be affected.

Nothing is further from the truth. Regardless of the expressed intentions and endless propaganda of the various alphabet agencies, price, as any student of freshman economics used to learn, is one factor that determines the abundant supply or scarcity of commodities, and whether they can be freely bought or must be sought for in out-of-the-way places or from unusual sources. When the supply of a particular commodity is scarce and money is plentiful because many are employed and wages are high, its price will rise, often out of any seeming relationship to its previous price level or the consumers' estimate of its usefulness.

It is obvious, for example, that when OPA sets the price for cream high enough, it becomes more profitable for the farmer to market his cream than to hold it and take on the additional problem of making butter, when butter sells for a lower price per pound of butterfat. Nor will he take the trouble to deliver cream to a creamery which offers a lower price (fixed by the government) for butterfat as cream for churning than the same cream brings as cream for coffee. Not only did this take place as recently as December 1942, but officials announced, indeed, that the ceiling price of light cream had been raised to "*halt any abnormal diversion of butterfat from cream to butter.*" [Italics ours—CR.] Is it any wonder that, with such "planning," we have shortages of butter and other foods?

The city consumer who likes to buy his supply of fresh meat and vegetables at the corner grocery store at prices he was accustomed to pay in pre-war years, must come to recognize that farmers will not care to deal with the interminable red tape necessary to get farm machinery and gasoline, or cope with the scarcity of farm

hands, the uncertainties of the weather and insect pests, and the longer hours which they themselves must work, if low or uncertain ceiling prices on cabbage, peas, carrots, string beans, and other fresh vegetables make it a gamble whether or not they will break even. There is no doubt that all consumers who are unable to raise their own vegetables or poultry would like to see low prices maintained, but *suppose it is a choice between high prices and no supplies at all?* For some things and in some sections of the country, that is the decision to be made. The prices to be paid must be high enough to induce the growers to plant, raise, and market needed crops in the face of numerous difficulties and obstacles.

Even the government planners recognize the soundness of this procedure at times. Last July, for example, the Department of Agriculture paid 3 cents a pound more than the OPA ceiling price on butter *in order to get supplies* for lend-lease shipments. The papers and magazines throughout the country are filled with stories about the flourishing "black market" in meat. This market exists because consumers are willing to pay—*must*, indeed, in many places pay—more than the ceiling price to get supplies regularly of this much needed, much prized food.

Americans have always been intolerant of artificial price controls. Witness the breakdown of the NRA before it was legally knocked out by the Supreme Court's decision in the Schechter case. Witness also the numerous attempts in various states to establish schemes for fixing merchants' prices and service or to limit the number of dealers, schemes which have never at any time or place been effectively enforced. There has always been a price-cutter who, when the supply of goods was more than ample, was willing to supply consumers with what they wanted at the price they were willing to pay, when he could do so with profit to himself. The same phenomenon works in reverse. Someone, somewhere, will act to supply every sort of needed goods, so long as people offer the money to pay for them.

The supplying of goods for human consumption is a complex and delicately interlocked mechanism that is best examined objectively and without moral or other bias. The observing consumer will note the new distribution situations that are developing and will make himself familiar with whatever forms the new channels take; some of these will represent the normal working out of private initiative and of vigorous commercial enterprise.

Many, for example, are learning to buy by mail things formerly bought "in person." Secondhand markets are rapidly being drawn on by informed people. Agencies that would not hitherto have thought of buying secondhand articles are now actively purchasing used machines and appliances when necessary. An internationally famous physicist of a distinguished western university was discovered going over a dealer's stock of used electrical equipment in Philadelphia, and making extensive purchases of instruments that his university would not even have considered a year or two ago.

If you are fortunate enough to count an engineer or other technically trained person among your acquaintances, you will find that such a man can be especially helpful with advice on shopping for secondhand electrical and mechanical appliances, cameras and other optical goods, tools, motors, and other articles. Engineers of the telephone system and the large electric power companies are likely to be particularly helpful in that way in locating merchants and dealers who sell or can repair or adjust unusual items or appliances.

In addition to learning an entirely new market set-up, consumers who wish to keep to a minimum the drop in their standards of living must learn to be as resourceful as their forefathers, in many ways. The food situation is admittedly bad, and it is important to bear in mind that its extent was not foreseen, and is neither fully known nor understood by officials in Washington. It cannot be too urgently stressed that all consumers should take personal steps to guarantee their own family's food supply so far as practicable, either by their own efforts in gardening, canning, and preserving, or by enlisting the efforts of a conveniently located farmer. Even with respect to wheat products, almost the only common and necessary foodstuff that can be expected to be available in ample supply, the imposition of artificially low prices on flour without a corresponding ceiling on the unprocessed grain, has so squeezed the millers as to produce shortages in certain sections where the flour mills have been unable to operate profitably within the narrow price limits established by those who are pleased to call themselves economists.

Some idea of the confusion in the policies of those who have accepted the responsibility for seeing that the American consumers get enough to eat is instanced by the pressure-canner situation. According to an announcement in the New York Times, someone in the government had the forethought to see that permitting the manufacture of pressure-canners would help to make available for consumers a greatly needed supply of home-processed foods. The newspaper announced that there was a possibility that pressure-canners, long out of production by orders of the WPB, might be permitted to be manufactured in limited quantities. An inquiry to a number of canner manufacturers revealed the fact that the order had not come through to them as yet, and *that if it was not received very shortly, it would be too late to get into production for distribution for the current canning year.* Canning by the old-fashioned oven or hot-water method is, of course, feasible, but government officials have been in the forefront of those

who have said that such methods are unsafe and hazardous for many types of vegetables and for meats and fish.

The life of easy choice for the home-front consumer is gone for the time being, perhaps for many years. If he becomes as keen and shrewd a buyer as some of our high-pressure salesmen have been sellers, he will come through the war period with success both for himself and his family, and the impact of his training on our merchandising system will inevitably play a tremendous part in the shaping of the character and quality of commodities, and of methods of distribution and selling in the post-war era.

It will be interesting to see whether consumers can hold the high standard of goods which has been set in this country, or whether, like the civilized Romans of earlier times, they will "succumb to the barbarians." As one able speaker once put it, there were bathtubs and many other modern conveniences in Rome in the golden days of the empire that compared favorably with ours today, but those who had them were too soft to fight even the crudely clothed and equipped barbarians. The same speaker is fond of pointing out that today they are still showing the ruins that those newcomers left behind them.

It rests on the shoulders of the American consumer whether, when the war is over, the standards of consumer living in the United States will remain high and continue upward and whether this country will again take its place as the leader in producing a high quality and great variety of consumers goods in vast quantities. To maintain these high standards, it will require hard and intelligent application of consumer knowledge and steady, aggressive, outspoken criticism and objection against all needless waste, and irresponsible and uninformed interference with production—production absolutely essential to meet the needs of civilians on the home front in the months ahead.

Storage Battery Dopes— Stay Away from Them

WHILE GASOLINE RATIONING will help to save tires, it will have the opposite effect on the life of batteries. If a car is not being run sufficiently to keep the battery well charged (particularly in winter weather), there will likely be trouble with starting. The way to avoid this is to have the battery charged occasionally at a service station or garage and, of course, to avoid needless use of lights, radio and other accessories that use current. But *don't* fall for the advertising of battery dopes designed to "pep up," "rejuvenate" or "add years of life to your battery." Such dopes, which have been the subject of many a profitable commercial promotion in years past and were then widely debunked by articles in government bulletins and the technical press, are in for a new lease of life in these times when many appeals are being directed at consumers to try this or that new product to save wear or deterioration of their essential appliances, now often hard to replace. Even big city department stores are advertising battery dopes, with the usual impossible claims. (The price commonly asked for these dopes is about $1.50.) The Bureau of Standards has tested over 100 brands; the list (from *Acculite* to *Uradia*) is too long to reproduce here. The findings were, in brief, that none of the products was of benefit to the battery, and that some are quite likely to do serious harm. The National Better Business Bureau has done excellent work in giving wide publicity among merchants to these findings. As to new or recently promoted brands, the reader will do well to assume that No. 101 of such battery dopes will be no better than Nos. 99 and 100.

Typical ingredients of the battery dopes are sulphuric acid, coloring matter, salts of sodium, magnesium, potassium, or aluminum, such as Epsom salts, alum, etc. Some of the mixtures can do no great harm; others can definitely damage a battery (particularly by causing an accelerated rate of self-discharge); any of them is almost certain to be a waste of the consumer's money. It is a good principle to bear in mind in connection with all such products that when an important discovery of value to consumers on a question of such importance is *really* made, it will be reported, not in department-store or automobile service-station advertising, but in scientific and technical journals and in the BULLETINS of Consumers' Research.

Back Bulletins Now Obtainable at a Bargain Rate for Each Student in School and College Classes

To meet the many requests we have received, classes may have Bulletins sent them in lots of 20 or more at 5c a copy, provided CR is permitted to select the back issues to be included (that is, to fill such orders back issues will be chosen from those of which adequate stocks remain).

The *regular* price of one such Bulletin is 30c, but if we may select the issues to be sent, we shall be glad to accommodate teachers having classes in buymanship, consumer problems, consumer science, or consumption economics at the very low price of 5c a Bulletin.

There will be no other charge except for express or parcel post charges for the package, which will be sent collect or C.O.D. (At the low price charged for the Bulletins, it is not practicable to include shipping charges, and further, it would be difficult to provide for them in advance by a fixed charge since the charges vary widely with distances to delivery points.)

Ratings of Motion Pictures

This section aims to give critical consumers a digest of opinion from a number of reviews, ranging from the motion picture trade press to Parents' Magazine which rates motion pictures not only on their quality as entertainment, but on their suitability in various aspects for children.

It should be emphasized that the motion picture ratings which follow do not represent the judgment of a single person but are based on an analysis of the reviews appearing in some 20 different periodicals.

The figures preceding the title of the picture indicate the number of critics who have been judged to rate the film A (recommended), B (intermediate), and C (not recommended). (See CR BULLETIN, March 1943, for sources of the reviews.)

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure
biog—biography
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
soc—social-problem drama
trav—travelogue
war—dealing with the lives of people in wartime
wes—western

A	B	C		
9	4	—	**Air Force**	*war-mel A*
1	4	3	**Amazing Mrs. Holiday, The**	*war-mus-dr AYC*
1	7	1	**American Empire**	*wes-dr AY*
—	7	4	**Andy Hardy's Double Life**	*com AYC*
—	1	2	**Ape Man, The**	*mel A*
1	10	2	**Arabian Nights**	*mel A*
—	1	6	**Army Surgeon**	*war-mel AY*
1	8	2	**Avengers, The**	*war-mel AY*
14	2	—	**Bambi**	*car AYC*
—	3	—	**Bandit Ranger**	*mus-wes AYC*
—	4	—	**Battle Cry of China**	*doc AY*
—	5	—	**Battle of Midway**	*doc AY*
—	2	6	**Behind the Eight Ball**	*mys-mus-com A*
1	2	—	**Behind Prison Walls**	*cri-com A*
—	4	1	**Bells of Capistrano**	*mus-wes AYC*
1	10	2	**Between Us Girls**	*com AYC*
—	2	1	**Billy the Kid in Sheriff of Sage Valley**	*wes AYC*
5	8	2	**Black Swan, The**	*mel AYC*
—	3	5	**Boogieman Will Get You, The**	*com AYC*
—	4	—	**Boots and Saddles (re-issued)**	*mus-wes AYC*
—	3	—	**Border Patrol**	*wes AYC*
—	2	5	**Boss of Big Town**	*mel AYC*
—	1	4	**Boston Blackie Goes Hollywood**	*cri-com AYC*
—	3	2	**Bowery at Midnight, The**	*cri-mel A*
—	3	7	**Busses Roar**	*war-mel A*
2	4	1	**Cabin in the Sky (all-negro)**	*mus-com A*
—	9	3	**Cairo**	*war-mus-mel AYC*
—	5	—	**Call of the Canyon**	*mus-wes AYC*
—	3	5	**Careful, Soft Shoulders**	*war-mel A*
3	12	1	**Casablanca**	*war-mel A*
—	6	7	**Cat People**	*mel A*
1	6	—	**Chetniks**	*war-mel AYC*
—	4	8	**China Girl**	*war-mel A*
—	4	2	**Cinderella Swings It**	*mus-com AYC*
—	3	3	**City of Silent Men**	*mel AY*
—	3	3	**City Without Men**	*war-mel A*
4	8	2	**Commandos Strike at Dawn**	*war-mel AY*
—	1	2	**Cosmo Jones in the Crime Smasher**	*mel AYC*
—	6	4	**Counter Espionage**	*war-mys AYC*
—	—	4	**Criminal Investigator**	*mel A*
—	8	5	**Crystal Ball, The**	*com A*
—	3	2	**Daring Young Man, The**	*war-com AYC*
—	3	—	**Dawn on the Great Divide**	*wes AY*
—	4	—	**Deep in the Heart of Texas**	*mus-wes AYC*
—	4	5	**Destination Unknown**	*war-mel A*
—	4	5	**Devil with Hitler, The**	*war-com AYC*
—	7	1	**Dr. Gillespie's New Assistant**	*dr A*
—	5	4	**Dr. Renault's Secret**	*cri-mel A*
—	5	2	**Enemy Agents Meet Ellery Queen**	*war-mel AYC*
—	8	2	**Eyes in the Night**	*war-mys AYC*
—	3	6	**Eyes of the Underworld**	*cri-mel A*
—	6	2	**Falcon's Brother, The**	*war-mys A*
—	1	2	**Fighting Devil Dogs, The (re-edited)**	*war-mel A*
—	3	—	**Fighting Frontier**	*mus-wes AYC*
—	2	2	**Flight for Freedom**	*war-dr A*
1	8	2	**Flying Fortress**	*war-mel A*
4	7	1	**Flying Tigers**	*war-mel AYC*
1	12	2	**Footlight Serenade**	*mus-com A*
1	11	2	**For Me and My Gal**	*war-mus-com AYC*
—	2	3	**Foreign Agent**	*war-mus-mel A*
1	5	5	**Forest Rangers, The**	*mel AY*
1	4	—	**Forever and a Day**	*war-dr AYC*
—	3	1	**Frankenstein Meets the Wolf Man**	*mys-mel A*
—	—	—	**Gallant Lady (See Prison Girls)**	
2	12	—	**Gentleman Jim**	*biog AYC*
—	9	—	**George Washington Slept Here**	*com AYC*
—	6	6	**Girl Trouble**	*com A*
1	5	6	**Glass Key, The**	*cri-mel A*
—	4	3	**Gorilla Man, The**	*war-mel A*
—	4	5	**Great Gildersleeve, The**	*com AYC*
—	2	3	**Great Impersonation, The**	*war-mel A*
—	7	1	**Happy Go Lucky**	*mus-com A*
—	7	3	**Hard Way, The**	*mus-dr A*
2	3	—	**Heart of the Golden West**	*mus-wes AYC*
—	3	5	**Hello Annapolis**	*com AYC*
—	3	5	**Henry Aldrich, Editor**	*mel AYC*
1	4	—	**Henry Aldrich Gets Glamor**	*com AYC*
—	3	8	**Here We Go Again**	*com AYC*
—	4	1	**Hi, Buddy**	*mel AYC*
—	3	6	**Hidden Hand, The**	*mys-com A*
1	9	4	**Hitler's Children**	*war-dr A*
—	3	4	**Hi 'Ya Chum**	*mus-com AYC*
—	3	2	**How's About It**	*mus-com AYC*
3	1	—	**Human Comedy, The**	*war-dr AYC*
—	10	5	**I Married a Witch**	*com A*
—	8	1	**Ice-Capades**	*mus-com AYC*
—	10	4	**Iceland**	*mus-com A*
1	2	—	**Idaho**	*mus-wes AYC*
2	9	4	**Immortal Sergeant, The**	*war-dr AY*
10	3	—	**In Which We Serve**	*war-dr A*
—	4	3	**Isle of Missing Men**	*war-mel A*
—	7	3	**It Comes Up Love**	*mus-com AYC*
—	6	3	**Jacaré**	*animal AYC*
—	4	2	**Johnny Doughboy**	*mus-com AY*
2	8	2	**Journey for Margaret**	*war-dr A*
—	3	1	**Junior Army**	*dr AYC*
2	5	3	**Keeper of the Flame**	*war-nov A*
—	3	3	**Kid Dynamite**	*cri-mel AYC*
—	3	2	**Lady Bodyguard**	*mel A*
—	5	2	**Lady from Chungking**	*war-dr A*

A	B	C		
—	2	2	Laugh Your Blues Away	*com AYC*
1	9	5	Life Begins at 8:30	*dr A*
—	3	2	Little Joe, The Wrangler	*wes AYC*
—	2	4	London Blackout Murders	*war-cri-dr A*
—	2	2	Lost Canyon	*wes AYC*
—	5	8	Lucky Jordan	*war-mel A*
—	5	4	Madame Spy	*war-mel A*
3	12	—	Major and the Minor, The	*com A*
—	3	6	Man in the Trunk, The	*cri-mys A*
—	—	5	Man of Courage	*cri-mel A*
—	5	5	Manila Calling	*war-dr A*
—	1	4	Man's World, A	*war-mel A*
—	6	6	Margin for Error	*war-dr A*
—	8	5	Meanest Man in the World, The	*com A*
—	4	1	McGuerins from Brooklyn, The	*com A*
—	1	3	Miss V from Moscow	*war-mel AY*
2	5	5	Moon and Sixpence, The	*nov A*
—	5	3	Moonlight in Havana	*mus-com A*
—	5	1	Mountain Rhythm	*war-com AYC*
—	3	7	Mrs. Wiggs of the Cabbage Patch	*dr AYC*
—	2	3	Mugtown	*cri-com AYC*
—	3	4	Mummy's Tomb, The	*cri-mel A*
—	5	3	My Heart Belongs to Daddy	*com AY*
2	11	—	My Sister Eileen	*com A*
—	1	4	My Son, the Hero	*war-com A*
—	1	2	Mysterious Doctor, The	*mys-mel A*
—	11	1	Navy Comes Through, The	*war-mel AY*
—	3	2	'Neath Brooklyn Bridge	*mel AY*
—	7	3	Night for Crime, A	*mys A*
—	3	4	Night Monster	*mys-mel A*
—	3	3	Night Plane from Chungking	*war-mel AY*
—	3	4	Night to Remember, A	*mys AYC*
—	9	4	Nightmare	*war-mys-mel A*
1	5	1	Northwest Rangers	*mel AYC*
3	9	2	Now, Voyager	*dr A*
—	3	2	Old Chisholm Trail, The	*mus-wes AYC*
—	5	4	Omaha Trail, The	*wes AYC*
—	6	8	Once upon a Honeymoon	*war-dr A*
—	3	2	One Dangerous Night	*mys AYC*
2	8	1	One of Our Aircraft is Missing	*war-mel AY*
—	2	4	Outlaw, The	*wes A*
—	2	2	Outlaws of Pine Ridge	*wes AYC*
—	4	4	Over My Dead Body	*mys-com A*
—	13	4	Palm Beach Story, The	*com A*
—	5	2	Payoff, The	*cri-mel A*
—	9	8	Pittsburgh	*mel A*
—	2	3	Power of the Press	*cri-mel AYC*
—	6	1	Powers Girl, The	*mus-com A*
—	1	4	Prison Girls (Previously released as Gallant Lady)	*mel A*
—	2	2	Queen of Broadway	*mel A*
—	4	4	Quiet Please, Murder	*war-cri-mel A*
—	2	1	Raiders of San Joaquin	*mus-wes AYC*
11	6	—	Random Harvest	*nov A*
—	2	1	Rangers Take Over, The	*mus-wes AYC*
3	11	3	Reap the Wild Wind	*mel AYC*
—	3	—	Red River Robin Hood	*mus-wes AYC*
—	6	3	Reunion (in France)	*war-mel A*
—	4	2	Rhythm Parade	*mus-com A*
—	2	1	Riders of the Northwest Mounted	*mel AYC*
—	5	—	Ridin' Down the Canyon	*mus-wes AYC*
4	10	1	Road to Morocco	*mus-com AY*
5	4	1	Saludos Amigos	*car AYC*
—	3	4	Scattergood Survives a Murder	*cri-com AYC*
—	4	4	Secret Enemies	*war-mel A*
1	5	1	Secrets of a Co-ed	*mus-mel A*
—	4	2	Secrets of the Underground	*war-mel AYC*
—	8	4	Seven Days Leave	*war-mus-com AY*
—	3	6	Seven Miles from Alcatraz	*war-mel A*
3	7	3	Seven Sweethearts	*mus-com AYC*
6	6	—	Shadow of A Doubt	*cri-dr A*
—	6	3	Sherlock Holmes and the Secret Weapon	*war-mel AY*
—	3	2	Silent Witness	*cri-mel A*
—	6	—	Silk, Blood, and Sun	*mel A*
1	6	4	Silver Queen	*mel A*
1	6	—	Silver Skates	*mus-com AYC*
—	4	4	Sin Town	*mel A*
—	4	1	Smith of Minnesota	*biog AYC*
—	3	1	Sombrero Kid, The	*wes A*
2	—	2	Something to Shout About	*mus-com A*
1	2	1	Somewhere in France	*war-mel AY*
—	4	3	Spirit of Stanford	*com AYC*
—	9	5	Springtime in the Rockies	*mus-com AYC*
—	2	1	Squadron Leader X	*war-mel AY*
—	1	2	Stand By, All Networks	*war-mel AYC*
4	6	1	Stand By for Action	*war-dr A*
1	2	1	Stranger in Town, A	*cri-com AYC*
1	13	2	Star Spangled Rhythm	*war-mus-com A*
3	5	3	Street of Chance	*mys-nov AY*
—	2	1	Sundown Kid, The	*wes AYC*
—	4	—	Sunset Serenade	*mus-wes AYC*
1	10	4	Tales of Manhattan	*dr A*
—	6	4	Tarzan Triumphs	*war-mel AYC*
1	14	—	Talk of the Town, The	*com A*
5	9	1	Tennessee Johnson	*hist-dr AYC*
—	2	2	Tenting Tonight on The Old Camp Ground	*mus-wes AYC*
—	4	—	Texas to Bataan	*mus-wes AYC*
—	1	3	Texas Trouble Shooters	*wes AYC*
—	3	6	That Other Woman	*mus-com AY*
—	6	3	They Got Me Covered	*war-com A*
—	2	3	They Raid by Night	*war-dr AYC*
—	4	3	Three Hearts for Julia	*war-com A*
—	8	4	Thunder Birds	*war-mel AYC*
—	4	—	Timber	*war-mel AYC*
—	3	3	Time to Kill	*mys-mel A*
—	5	9	Tish	*com A*
—	2	5	Tomorrow We Live	*cri-mel A*
—	3	3	Top Sergeant	*war-mel AYC*
—	1	3	Tower of Terror	*war-mel A*
—	3	3	Traitor Within, The	*mel A*
—	2	3	Truck Busters	*war-cri-mel AYC*
—	—	3	Two Fisted Justice	*wes AYC*
—	2	3	Two Weeks to Live	*com AYC*
—	4	4	Undercover Man	*wes AY*
—	1	7	Underground Agent	*war-mel AYC*
—	5	3	Undying Monster, The	*mys-mel A*
1	11	1	Unfinished Business	*com AY*
—	6	3	United We Stand	*doc AYC*
—	10	4	Valley of the Sun	*wes AYC*
—	3	1	Vengeance of the West	*wes A*
5	8	2	Wake Island	*war-dr AYC*
—	10	6	War Against Mrs. Hadley, The	*war-dr AYC*
—	5	1	War Dogs	*mel AYC*
—	6	1	We Are the Marines	*doc AYC*
—	2	1	West of the Law	*wes AYC*
—	4	1	Westward Ho	*wes AYC*
—	8	1	When Johnny Comes Marching Home	*war-mus-com AYC*
—	9	2	Whistling in Dixie	*cri-mys AYC*
—	12	7	White Cargo	*dr A*
—	6	6	Who Done It?	*mys-com AYC*
—	2	5	Wildcat	*mel A*
2	9	2	Wings and the Woman	*biog-war-dr A*
—	7	3	Wings for the Eagle	*war-dr AYC*
—	9	1	World at War	*war-doc A*
—	3	3	Wrecking Crew	*mel AY*
—	2	4	X Marks the Spot	*cri-mel A*
—	8	4	Yank at Eton, A	*com AYC*
—	1	4	Yank in Libya, A	*war-mel A*
13	4	—	Yankee Doodle Dandy	*mus-biog AYC*
—	2	3	Yanks Are Coming, The	*war-mus-com AYC*
—	3	1	You Can't Beat the Law	*mel A*
—	5	3	You Can't Escape Forever	*cri-mel AY*
2	10	1	You Were Never Lovelier	*mus-com AYC*
—	4	3	Young and Willing	*com A*
3	5	—	Young Mr. Pitt, The	*biog AY*
—	6	1	Youth on Parade	*mus-com AY*
—	1	4	Yukon Patrol, The	*war-mel AYC*

The Consumers' Observation Post

[Continued from page 4]

TRAVEL IN WARTIME IS SOMETHING TO BE AVOIDED if possible. If a long trip must be taken, here is some helpful advice from a veteran traveler. The streamliner train service will likely equal the speed of the airplane in getting you to your destination if you are not headed for a metropolitan center which has its own airport. Under present conditions, almost any train is likely to run late, and you will often make just as good time on a semi-local as on an express for shorter trips. The main lines with a reputation for crack service are likely to be the most crowded, and you can get to your destination with less crowding and waiting in line on lesser-known lines, or railroads that normally may take an hour or two longer for a trip, or which have their stations located in more inaccessible parts of the city of departure or arrival. Railroad station dining rooms and lunch counters and railroad dining cars are taxed to capacity. Plan to eat elsewhere before your departure and, if dining at a particular time is important to you, pack a lunch. Remember now that parcel check rooms will be overloaded, and ample time must be left to deposit and pick up parcels or bags. Telephone booths in stations at heavy traffic points will be jammed, taxicabs perhaps unavailable. Get to the station well ahead of time to allow for a long wait at the ticket window.

* * *

BUTTER IS A FAVORITE TOPIC OF CONVERSATION these days. Recipes are given for extending one's limited supply with gelatin and water or by whipping the butter with milk, although one state health department warns that these two procedures constitute adulteration forbidden by law for restaurants, hotels, or institutions. One solution to the problem has been suggested by a jazz fan who shakes a quart of cream in a glass jar vigorously to the accompaniment of his favorite tunes until it churns up to butter. The cream may be either sweet or sour but should be warmed to room temperature. The resulting product may be washed free from the whey, salted, and set in the refrigerator to harden. The color will be pale and the cost based on the use of light coffee cream around $1.05 a pound. Small home churns are frequently available from hardware stores in country districts or from mail-order concerns.

* * *

ACTUAL FOOD SHORTAGES of one type or another appear to be in prospect for consumers in certain areas—no fooling! There isn't much that the city apartment dweller can do except locate a farmer who will handle orders for supplies by mail or express, but everyone else should give some thought and study to the ways in which his ancestors laid in their winter stock of food. Everything that the family will eat should be canned, dried, preserved, or otherwise

If You Were Lost

IN THE WOODS, HOW WOULD YOU FIND YOUR WAY OUT?

If you were a good woodsman, you would get your bearings by looking for the sun or the North Star, smoke of a campfire, or by following a ridge or a stream.

IF YOU ARE LOST in present marketing situation not knowing what is safe to buy, or how to find the things you need, where to look, or how to repair or extend the usefulness of what you already have,—what do you do?

Well, many people turn to CONSUMERS' RESEARCH BULLETIN. If you are one of the people who have found CR Bulletins a useful guide through the purchasing maze, won't you tell your friends about us and pass on the handy subscription blanks on the next page.

Tell Your Friends to Subscribe Now to Get the 1942-1943 ANNUAL CUMULATIVE BULLETIN!

stored, so far as practicable. The problem of building an outside storage pit for root vegetables should be carefully considered. Advice to be found in Home Storage of Vegetables, U. S. Department of Agriculture, Farmers' Bulletin 879, is of some interest as a starting point. Ask your own state experiment station for their information, which is adapted as a rule to your own climate, food supply and other local problems. Since it is expected that rabbit meat will not be rationed, consider carefully the possibility of raising rabbits in the backyard as a source of meat supply. The pamphlet on Rabbit Production, U. S. Department of Agriculture, Farmers' Bulletin No. 1730, will be helpful for a preliminary survey of the problem. Your Congressman will undoubtedly be glad to see that you are sent both pamphlets without charge.

* * *

CAREFUL INSPECTION AND CHECKING OF MERCHANTS' SCALES by state and municipal authorities should not be curtailed for reasons of governmental economy. The prevention of short-weighing and short-measuring by merchants is most important to consumers these days. In a recent checkup in Kansas City, it was found that millions of dollars have been taken away from consumers by laxity of city inspection officials. Some scales, indeed, had not been tested for 25 or 30 years, and inspectors had thought they were doing enough just to look at a weighing or measuring device and paste an approval certificate on it. One scale cheated the consumers 2 ounces on every sale of meat, and this handy appliance netted its owner about $40 a day in unearned profits.

* * *

HELPFUL HINTS FROM THE CHEF for My Lady, the Cook: Put a slice of bread on the bottom of the pan when making pea soup to prevent the peas from sticking and burning. Add a slice of lemon to clear soups for improved flavor. To keep fish from falling apart while under the broiler, rub it thoroughly with lemon juice first. The lemon juice treatment also brings out the flavor and improves the color of baked or even boiled fish.

* * *

SUBSTITUTE for the old-fashioned paring knife: For peeling carrots, potatoes, and other root vegetables and fresh fruits which take so much of the busy homemaker's time these days, a really effective gadget is the Nee-Action Peeler-Shredder-Slicer with the "floating blade" (pivoted, so that it can rock and follow the contours and wrinkles of carrots, potatoes, oyster-plant) manufactured by the M. & M. Mfg. Co., Chicago, and sold in the various 5-and-10-cent stores. The simpler model which sells for ten cents is provided with merely the pivoted blade for peeling. A later version has an attachment for cutting up string beans, which has been found to work quite satisfactorily. This new model sells for 25 cents. The blade of one of the older models stayed sharp in light but almost daily use for some eight months. To avoid needless dulling of cutting edges, care should be taken to wash sand off the vegetables before using the peeler, and to dry the blade off carefully before putting the tool away. Fortunately stocks of the efficient device appear to be ample at the present time.

GIVE THESE BLANKS TO FRIENDS

for new subscribers

Consumers' Research, Inc., Washington, N. J.

☐ I enclose $3 (Canada & foreign $3.50) for one year's subscription to the Consumers' Research Bulletin (which includes the Annual Cumulative Bulletin and Bulletins monthly—except during July and August).

It is understood that my handling of any CR material which is marked "The analyses of commodities, products, or merchandise appearing in this issue of the Consumers' Research Bulletin are for the sole information of Consumers' Research subscribers" will be in accordance with that direction.

Name.....
(Please write in longhand)

Street.....

City..... State.....

My profession or business is.....

CR-4-43

GIVE THESE BLANKS TO FRIENDS

for new subscribers

Consumers' Research, Inc., Washington, N. J.

☐ I enclose $3 (Canada & foreign $3.50) for one year's subscription to the Consumers' Research Bulletin (which includes the Annual Cumulative Bulletin and Bulletins monthly—except during July and August).

It is understood that my handling of any CR material which is marked "The analyses of commodities, products, or merchandise appearing in this issue of the Consumers' Research Bulletin are for the sole information of Consumers' Research subscribers" will be in accordance with that direction.

Name.....
(Please write in longhand)

Street.....

City..... State.....

My profession or business is.....

CR-4-43

Phonograph Records

By WALTER F. GRUENINGER

Ratings of Phonograph Records

Prices Include Excise Tax

Key: AA—highly recommended; A—recommended; B—intermediate; C—not recommended.

	Quality of Music	Interpretation	Fidelity of Recording

ORCHESTRA

Elgar: *Pomp & Circumstance March, No. 1* & Traditional: *Londonderry Air.* Columbia Broadcasting Symphony under Barlow. 2 sides, Columbia 71441. $1.05. Perfunctory performances and blurred recording. The lovely *Londonderry Air* (*Danny Boy*) fares better in the Grainger arrangement on Victor 8734 and the popular Elgar concert march (*Land of Hope and Glory*) really *sounds* on Victor 11-8226. — A B B

Glazounov: *Two Concert Waltzes* (*Op. 47 & 51*). Chicago Symphony Orchestra under Stock. 4 sides, Columbia Set X232. $2.62. Waltzes which recall those of Tschaikowsky, played with appropriate verve. — B AA A

Ravel: *Alborada del Gracioso.* Cleveland Orchestra under Rodzinski. 2 sides, Columbia 11910. $1.05. A rhythmic Spanish dawn-song by a modern French master of orchestration. In my opinion, the orchestra has played better on other occasions. I feel that Rodzinski doesn't extract as much spirit from the score as does Toscanini, whose performance, regrettably, has not been recorded. Strict monitoring pales some of the brilliant color. Nevertheless, this is the best available recording. — A A A

Sibelius: Symphony No. 7. St. Louis Symphony Orchestra under Golschmann. 6 sides, Victor Set 922. $3.67. — A A AA

5 sides & *Pelleas & Melisande*—*Pelleas*, 1 side. Philharmonic-Symphony Orchestra of New York under Beecham. Columbia Set 524. $3.67. — A A B

Close to a decade ago Sibelius finished this one movement symphony which many connoisseurs enjoy. Heretofore, it has been available only under the direction of Koussevitzky in Sibelius Society Album 2 (Victor Set 394, $7.87) with Sibelius *Symphony No. 3* under Kajanus, neither of which could be purchased separately. Fidelity honors go to Golschmann with Koussevitzky a poor third. As for interpretation, Beecham excels in lyricism, Koussevitzky in force. Golschmann combines elements of both. Beecham takes only five sides, gives a bonus of a *Melisande* excerpt which suggests the popular *Valse Triste.*

Smetana: *The Moldau.* National Symphony Orchestra under Kindler. 4 sides, Victor Set 921. $2.62. This captivating tone poem, loved by laymen and musicians, has been recorded half a dozen times but never beyond the range of lenient criticism based on current standards. The fidelity of Kindler's recording heads the list but his interpretation lacks charm. — AA B AA

CHAMBER & INSTRUMENTAL

Bach: *Gavotte from Partita 3* & **Kreisler:** *Rondino on a Theme by Beethoven.* Kreisler (violin). 2 sides, Victor 10-1022. 79c. Kreisler plays beautifully his arrangement of the *Gavotte* and his own *Rondino.* Released in England 5 years ago, but by current standards an excellent recording. — A AA AA

Dohnanyi: *Two Rhapsodies, One Etude.* Schwalb (piano). 4 sides, Bost Folder BA3. $3.67. A gifted Hungarian pianist makes his recording debut with three inconsequential compositions by his teacher, greatly impaired by excessive surface noise and faint recording. — B AA C

Massenet: *Thais—Meditation* & **Sarasate:** *Romanza Andaluza.* Milstein (violin). 2 sides, Columbia 71400. $1.05. Two popular encores fiddled for all they are worth. — A AA AA

Schumann: *Quintet in E Flat.* Busch Quartet and Serkin (strings & piano). 8 sides, Columbia Set 533. $4.72. A hundred-year-old masterpiece which nearly always appeals to those who ordinarily "see nothing in chamber music." The gifted Busch performers, whom I have heard in recital on several occasions this season, play with penetrating understanding. The recording, though slightly coarse-grained, is otherwise excellent. The older, commendable Schnabel-Pro Arte performance (Victor Set 267, $4.72) gives ground in fidelity. The two-year-old Sanroma-Primrose recording (Victor Set 736, $4.20) which I recommend for performance and smooth recording takes one side less (52 cents saved) because the *Scherzo* is played in 4¼ minutes (1 side) against the Busch's 4½ (2 sides). — AA AA AA

Villa-Lobos: *The Baby's Family—China Doll, Rag Doll, Cardboard Doll.* Novaes (piano). 2 sides, Columbia 17355. 79c. Miss Novaes' exceptional artistry deserves more substantial musical fare than these bon-bons by her compatriot. — C AA A

VOCAL

Bach: *Birthday Cantata—Was Mir Behagt.* Harris (soprano). 2 sides, Hargail Recorder MW104. $1.05. The beautiful "Sheep may safely graze" aria seems too difficult for Miss Harris. The use of recorders, harpsichord, and viola da gamba as accompanying instruments is all to the good but the low volume level makes the needle scratch annoying even to a connoisseur accustomed to this sound. — A B B

Beethoven: *Fidelio—Gott! welch' Dunkel hier.* Maison (tenor). 2 sides, Columbia 71410. $1.05. A recitative and aria in the grand manner from Beethoven's only opera sung expressively by the Metropolitan's distinguished Belgian tenor. — A AA AA

Foster: *Gentle Annie* & **Lohr:** *Where My Caravan Has Rested.* Thomas (baritone). 2 sides, Victor 10-1023. 79c. John Charles Thomas' New York City recital last Spring was, to me, one of the season's high spots. His singing of these sentimental songs, however, does not match his art of that night. — B B A

Rossini: *La Danza* & **Denza:** *Funiculi-Funicula.* Korjus (soprano). 2 sides, Victor 11-8289. $1.05. These gay Italian songs, recorded some time ago in Europe, are here offered by Miliza Korjus' nasal, flexible voice plus a thin chorus and orchestra and an abundance of tambourine. — B A A

Wagner: *Lohengrin—Elsa's Dream* & *Tannhauser—Elizabeth's Prayer.* Varnay (soprano). 2 sides, Columbia 71399. $1.05. A workmanlike though far from definitive projection of two arias recorded often but never without some deficiency. — B A AA

Wagner: *Die Walkure—Du bist der Lenz* & *Lohengrin—Euch luften die mein Klagen.* Varnay (soprano). 2 sides, Columbia 17354. 79c. Astrid Varnay and her anonymous orchestra are no match in these same excerpts for Flagstad and the Philadelphia Orchestra on Victor 1901. — B B AA

LIGHT & MISCELLANEOUS

Strauss, J.: *Marches.* Boston Pops Orchestra under Fiedler. 4 sides, Victor Set EM1. $1.57. Four marches, by the waltz king, you'd expect to hear at a cotillion. — A A A

Strauss, J.: *Waltzes.* Cavallaro (piano). 8 sides, Decca Set 339. $2.72. In strict dance tempo, against a barely discernible rhythmic background of guitar, bass and drums Carmen Cavallaro plays abbreviated piano versions of 8 popular Strauss waltzes. Included are *Blue Danube, Tales from Vienna Woods, Vienna Life, Artist's Life, Southern Roses, Emperor, Voices of Spring, You and You.* For this intimate 1 A.M. nostalgic cafe-style, the set is highly recommended. My reservation stems from a personal preference for full orchestral, unabbreviated performances. — AA A AA

Continue Regular Buying of WAR BONDS